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AMERICAN BEE JOURNAL

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G. M. Doolittle, 1846-1918

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Cartons.
Cellophane Wrappers.
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COUNCIL BLUFFS, IOWA

LOTZ Quality SECTIONS

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Top Quality Material—Glossy Polish—Smooth
Dovetails—Oval V-grooves—Accurate Dimensions
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With the ever-increasing demand for comb honey
why not produce more, and increase your profits?
Remember there is no ceiling price on comb honey.

Prices in our 1944 price list still in effect.

August Lotz Company
Manufacturers and Jobbers
of Bee Supplies
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Leather Italian Queens

We are proud of the reputation our bees have made for themselves and for us.

We can now guarantee our bees to be of the highest production stock available today, and that our bees will not swarm unless badly neglected. We guarantee unconditionally that there is no gentler Italian bee available anywhere.

We will gladly replace any queen that does not live up to this statement after introduction. Replacement made immediately if queens arrive dead or in poor condition.

Sent clipped or by air mail at no extra cost

2-lb. package with queen . . \$3.60

3-lb. package with queen . . 4.50

Queens, \$1.00, any number

THE RICH HONEY FARMS
JEANERETTE, LOUISIANA

Now Is the Time to Requeen

New queens now will increase your present crop or insure big colonies for the

next flow. Don't neglect your queens. We have spent many years learning to produce queens to suit your needs. Also package bees to fill up these empty hives. Buy now for next year. Then you will have fully grown colonies on hand.

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.10	3.85	\$4.95	\$6.05	\$7.15
25-99	1.00	3.60	4.65	5.70	6.75
100 up	.90	3.35	4.35	5.35	6.35

For queenless package deduct price of queen. Payable in U. S. Funds

Merrill Bee Company : State Line, Mississippi
MISSISSIPPI'S OLDEST SHIPPERS

Over Fifty Years With the Bees Age, Ability, Experience

Package Bees Queen Bees

DELIVERY AFTER MAY FIFTEENTH

Over half a century of Select Breeding. All queens are raised and reared under normal hive conditions, as exceptionally large size nuclei colonies are used exclusively. We guarantee all our queens to be purely mated and laying full capacity when caged. In this way, for the price of untested queens all advantages of tested queens are assured.

All package bees are guaranteed to be slightly overweight. Safe arrival warranted. Personal supervision in the production of both queens and packages maintained at all times.

PRICES AFTER MAY 15TH

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.10	\$3.85	\$4.95	\$6.05	\$7.15
25-99	1.00	3.60	4.65	5.70	6.75
100-up	.90	3.35	4.35	5.35	6.35

FOR QUEENLESS PACKAGES DEDUCT PRICE OF QUEEN.
PAYABLE IN U. S. FUNDS

M. C. BERRY & SON : MONTGOMERY, ALABAMA
Box 684
OLDEST ACTIVE PACKAGE SHIPPERS IN U. S. A.

Extra Care : Fast Service : High Producers : Prolific - Gentle

Our stock has been chosen for prolificness, high production, gentleness, and appearance. There are four express and mail trains daily to give you fast service.

For extra safety in shipping, we use cages with more screen wire; we provide more syrup to guard against any possible delays; we take every precaution to make sure that your bees reach you in perfect condition. 1946 PRICES:

Lot	Queens	2-Lbs.	3-Lbs.	4-Lbs.	5-Lbs.
1-5	\$1.35	\$4.25	\$5.25	\$6.25	\$7.25
5-15	1.30	4.15	5.15	6.15	7.15
15-25	1.20	4.00	5.00	6.00	7.00
25 up	1.15	3.90	4.90	5.90	6.90

Above package prices include queen. Queenless packages, subtract \$1.15 from price of package with queen. All queens

airmail, postpaid, but package bees are F. O. B. shipping point and are express collect.

It is preferable to ship package bees by Railway Express, however, they can be mailed and in that event, customer should include postage.

Terms: Small orders, cash in full. Large orders, 20 per cent deposit, balance to be received two weeks before shipping date. U. S. funds.

The Daniels Apiaries : Picayune, Miss.

American Bee Journal

HAMILTON, ILLINOIS

June, 1946

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Associate Editors—M. G. Dadant, Frank C. Pellett, J. C. Dadant, Roy A. Grout

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QUEENS . . . BEAUTIFUL QUEENS

Get them in June, they will introduce better when there is a little honey coming in.

1 to 50 \$1.00 50 to 100 85c
Any Number

2-lb. package \$3.50 3-lb. package \$4.50

HUBER FOREHAND : Satsuma, Ala.

42 Years Among the Bees

SUNKIST ITALIAN QUEENS

How much honey did you fail to gather due to failing queens? Don't risk another short crop due to inferior queens. Our queens are young, vigorous, laying Italian queens. We offer mated queens, live delivery, health certificate, satisfaction.

REDUCED PRICES, Postpaid—1-25, 90c; 25 up 80c.

SUNKIST BEE COMPANY

ROUTE 2, BOX 9, HOUMA, LOUISIANA, TELEPHONE 1299-J

Three Band Italian Bees With Queens of Highest Quality

PRICES AFTER JUNE 1ST. 2-lb. package with queen \$3.50
3-lb. package with queen 4.50
Queen each \$1.00—Queenless package deduct price of queen.

E. R. RALEY, Box 1610, Daytona Beach, Florida

PACKAGE BEES AND QUEENS

	Queens	2-Lbs.	3-Lbs.	4-Lbs.	
1 to 5	\$1.00	\$4.00	\$5.00	\$6.00	Get our line bred Italians noted for their hardiness, vigor, and prolificness. Terms 20% deposit, balance at shipping date.
6 to 24	.90	3.85	4.75	5.85	
25 up	.85	3.75	4.50	5.75	
Queens—Special	\$70.00 per hundred.				

B. J. BORDELON APIARIES : Moreauville, La.

ST. ROMAIN'S "HONEY GIRL" ITALIANS

Book your queen orders for summer requeening, in advance if possible, it will help us to give you better service.

Packages	1-4	5-11	12-49	50-up
3-lb. with queen, ea.	\$5.00	\$4.75	\$4.50	\$4.40
4-lb. with queen, ea.	6.00	5.75	5.50	5.40
Queens	1.00	.90	.85	.75

St. Romain's "Honey Girl" Apiaries : Moreauville, La.

A-B-J Ads Are Result Getters

Queens ITALIAN Queens

Have plenty of good quality queens for immediate shipment. All queens are held in the mating hives until an even brood pattern is assured. We know you will be pleased with our queens and service.

YOUNG LAYING QUEENS
\$1.00 EACH

LOUIS L. COUCH

"The Village Beekeeper"

PINEVILLE, LOUISIANA

3-BANDED ITALIAN BEES AND QUEENS

Booked for month of April, but are booking for the month of May.

1-25	2-lb. \$4.00	3-lb. \$5.00
25-99	2-lb. 3.75	3-lb. 4.75
100 and over	2-lb. 3.50	3-lb. 4.50
Queens \$1.10		

J. P. CORONA

Box 124

Kenner, LA.

Mr. Honey Producer

Join a progressive cooperative now and safeguard your future market. We need the honey at ceiling prices. You need us to safeguard the time when selling is hard. Join now.

For particulars write

Illinois Honey Producers Assn.

Mt. Sterling, Illinois

ITALIAN QUEENS

Three-Banded, northern bred, for business. Safe arrival. Hope to send queens by return mail. Untested \$1.00; 6, \$5.50; 12, \$11.00. Select \$1.25.

I. F. MILLER

WARREN, PENNSYLVANIA, RT. 3

ROOT SERVICE Beekeepers' Supplies

HONEY CONTAINERS
Write for Price Lists

A. I. Root Co. of Chicago

224 West Huron Street, Chicago, Ill.

HELLO FOLKS!

HERE WE ARE AGAIN

STEVENSON'S LINE-BRED GOLDENS

We are ready to work for you in our most excellent way. Prices for untested queen \$1.25; 50 to 99, \$1.10; Up \$1.00

STEVENSON'S APIARIES Westwego, Louisiana

"SILVERHIDE"

The ready mixed aluminum paint that you have been waiting for to paint your bee hives with. Reduces the temperature from ten to fifteen degrees, highly resistant to acid, fumes and brine conditions. No waste, every drop can be used, it does not skin over or harden in the container, apply with hand brush or air spray. Write for information and prices at once.

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P. O. Box 83 Orangeburgh, N. Y.

Beewise-Read A-B-J

AMERICAN BEE JOURNAL



Good News!

FULL LINE OF Continental Honey Cans AGAIN AVAILABLE

2½ lb. single friction top can; 5 lb. and 10 lb. pail;
and 60 lb. square can

—CALL YOUR NEAREST CONTINENTAL DISTRIBUTOR—

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IOWA

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Sioux City—Sioux Honey Assn.
G. B. Lewis Co.
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Paducah—Walter T. Kelley.

MICHIGAN

Grand Rapids—A. G. Woodman & Co.
Onsted—L. M. Hubbard.

MINNESOTA

Badger—Gordon A. Bell.
Forest Lake—Lionel Hopkins.
Minneapolis—Mondeng Mfg. Company.
Moorhead—Northwestern Supply Co.

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Higginsville—Leahy Mfg. Company.

MONTANA

Manhattan—Cloverdale Apiaries.
H. B. Chambers.

NEW YORK

Albany—G. B. Lewis Company.
Groton—Finger Lakes Honey Prod. Assn.
Syracuse—A. I. Root Company.

NORTH DAKOTA

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San Antonio—A. I. Root Company.

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Lynchburg—G. B. Lewis Company.

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CONTINENTAL CAN COMPANY, Inc.

QUEENS

Progeny-Test 3-Banded Italians of Highest Quality

Also Mraz's Strain of High Quality Daughters of Stock Bred for Resistance. (Health Certificates Accompany All Shipments.

1 to 10, \$1 Ea. 11 to 25, 90c Ea. 26 and over 75c Ea.
NO EXTRA CHARGE FOR CLIPPING

Garon Bee Company : : Donaldsonville, La.



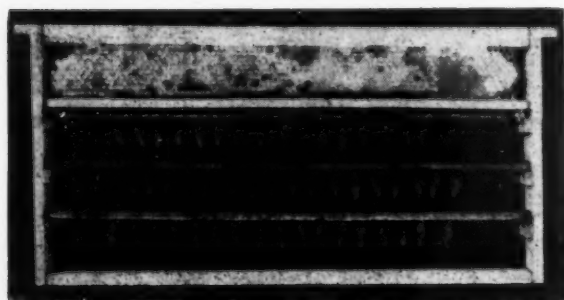
Queens \$1 Each

10 for \$9

Write for prices 25 or more. Young 3-banded laying queens, fresh from our yards; health certificate with each shipment. . . . Shipped daily from Paducah.

THE WALTER T. KELLEY CO.
PADUCAH, KENTUCKY

Your Colonies Are No Better Than Your



Queens—Plan now to replace those old queens and make full use of your equipment.

OUR ITALIAN QUEENS ARE SECOND TO NONE
PRICES—1 to 50...\$1.25 ea. 50 and over...\$1.00 ea.
Terms: 10% with order, balance before shipment.

JOHN S. SHACKELFORD
LIVE OAK, CALIF.

Knight's Leather Colored Italian Queens

The Best Honey Gatherers

Prices: \$1 each; 100, 90c each

No charge for clipping
Pure mating guaranteed

JASPER KNIGHT
HAYNEVILLE, ALA.

Wanted For 1947 Season

TWO QUEEN BREEDERS, TO RUN 8,000
NUCLEI. ONLY HONEST RELIABLE MEN
CONSIDERED, NO DRINKERS. YEAR
AROUND WORK. GIVE AGE, EXPERIENCE.
CAN START ANY TIME.

Tanquary Honey Farms, Inc.
LENA, SOUTH CAROLINA

Wanted-Honey and Beeswax

We pay highest legal ceiling prices for both white and amber
honey. Prompt remittance.

Ship your old comb and cappings to us for rendering into
beeswax. We charge only 2 cents a pound for wax rendered
when shipment weighs 100 lbs. or more (net), 3 cents on
smaller shipments.

We will WORK your wax into foundation at very low rates.

Have you tried our "HERCULES" IRONSIDES FOUN-
DATION. Makes combs to be proud of. Send for 1946 price
list.

The Fred W. Muth Company
229 WALNUT ST. CINCINNATI 2, OHIO

Quality Italian Package Bees and Queens

THANK YOU—

The Customers who have made our initial season a success.
We tried to give you quality and service. We think we did
a good job. This, however, is for you to say. If we failed
in any particular, tell us; if we pleased you, tell your friends.
We are now beginning preparation for more business next
season and can promise you our utmost in quality and service.

Order early for best date reservations.

GIRARDEAU APIARIES
J. H. GIRARDEAU, JR., MANAGER
TIFTON, GEORGIA

It is never too late

to get the help which is available to you in daughter queens
of "DR" stock. It will be a real help in your fight to control
American foulbrood.

The performance of this stock is why beekeepers are placing
repeat orders for larger numbers of queens. Satisfaction is
what you get with the use of this stock.

This stock has been improved each year by scientific
selection. No other stock can offer the quality of parentage,
of rearing methods and of apiary testing service. So why
not buy those queens which will give you the greatest value.

WRITE FOR SHIPPING DATES.
NO CHANGE IN PRICES FOR THIS SEASON.

Iowa Beekeepers Association
STATE HOUSE DES MOINES 19, IOWA

TIN PAILS

We again have a complete stock of tin and glass con-
tainers; quick shipment from large Paducah stock.

TIN PAILS

Carton 50 five-lb. pails, wt.
26 lbs., price \$3.15
Carton 50 ten-lb. pails, wt.
40 lbs., price \$4.85

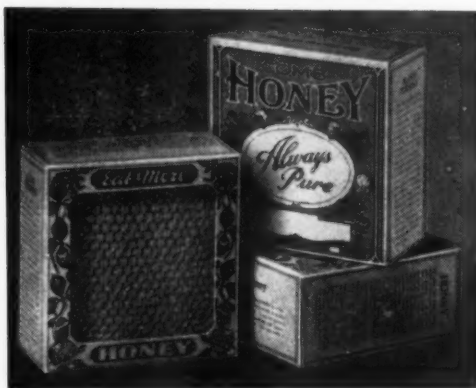
GLASS

16-oz. Economy Jars, carton of 24,
11 lbs., price \$.70
32-oz. Economy Jars, carton of 12,
12 lbs., price \$.42
5-lb. Economy Jars, carton of 6,
wt. 10 lbs., 12 cartons \$5.00; 24 \$9.90

5% Discount From These Prices on Orders of Over \$50 at One Time
SAMPLE HONEY LABELS MAILED UPON REQUEST

THE WALTER T. KELLEY COMPANY : Paducah, Ky.

Comb Honey Cartons



Sell your section honey in Lewis window cartons. Keep the honey clean and free from contamination by using these handy packages. You simply tuck in one end of the carton, drop the section inside, and tuck in the other end and the job is complete, ready for sale.

Compete successfully with other packaged foods. Use these pink and green cartons for color attraction. The wide glassine face of the carton shows the white-capped honey beneath and makes it easier to sell your honey.

Cartons are scarce, due to the paper shortage. *Right now we have an ample supply but do not know when we can get more. Anticipate your wants, at least in part, and order now.*

We have 5-lb. tin pails, too. Ask for prices.

WINDOW CARTONS

- D644 4 1/4"x1 3/8" Beeway Window Cartons.
D645 4 1/4"x1 1/2" No Beeway Window Cartons.
D646 4"x5"x1 3/8" No Beeway Window Cartons.

Prices on all Window Cartons **\$1.10** per 100;
\$4.95 per 500; **\$9.63** per 1,000. Wt. on above
Cartons 6 1/2 lbs. per 100, 55 lbs. per 1,000.

All prices subject to change without notice.

G. B. LEWIS COMPANY : : : Watertown, Wisconsin

BRANCHES: COLONIE & MONTGOMERY STS., ALBANY, (1) N. Y.; 1117 JEFFERSON ST., LYNCHBURG, VA.;
214 PEARL ST., SIOUX CITY, (14) IOWA.

SEND YOUR ORDER TO OUR OFFICE NEAREST TO YOU

Spring Requeening With Dual Queens

By E. S. Miller

IN the spring of 1945 I tried as an experiment a modified form of the two-queen method, chiefly as a means of early spring requeening. It seemed to work quite satisfactorily in more ways than one. Believing the plan worthy of further trial, I hope to experiment this spring with a larger number of colonies. The plan is as follows:

Nuclei were formed in regular hive bodies about the beginning of fruit bloom, with two frames of brood and adhering bees taken from strong colonies and with queens purchased from the south. These nuclei were each placed over a fine wire screen as a top section above colonies which were somewhat below normal in strength. The purpose of the screen is to prevent the bees deserting to the colony below. Each hive body containing a nucleus was then filled out with drawn combs and provided with a small entrance which was stuffed temporarily with grass. In about two weeks, when the nuclei were well established, the wire screens were removed and replaced by queen excluders, both queens being allowed to occupy hive until after beginning of the clover flow. The old queens were then dispensed with and the two brood chambers inter-changed, placing at the bottom the one containing the young queen. Thus the mother colonies were greatly strengthened for the clover flow without the necessity of feeding an undue number of larvae during the period of nectar gathering, and the colonies automatically were requeened. Colonies so manipulated last spring produced considerably more honey than did the average colony in the yard.

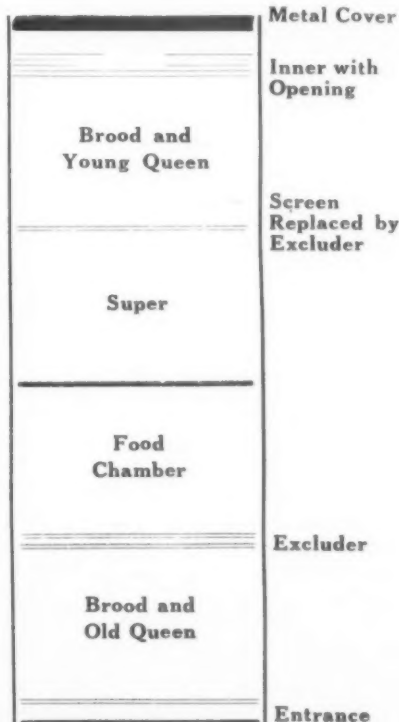
Of course, to make the plan succeed it is important to have in the hive a plentiful supply of stores in order to feed the increased number of larvae. Instead of interchanging brood chambers it might work quite as well in most cases if in June the bees and queen in the top section were shaken below and the two queens allowed to fight it out. If it is desired to save both queens the young queen may be used for re-

queening elsewhere or placed in nuclei to build up for the fall flow or for winter.

Here's another scheme that seems to work well. In fact, it has been tried and found to give a big boost to colonies where there is a fall flow. It is this: Rear queens in nuclei, during the clover flow, over wire screen as above outlined, replacing the screen with a queen excluder after the young queen begins to lay. Let the two queens co-operate until the fall flow is on when the old queen is replaced.

By the way, here's another little kink. If in early spring you have colonies apparently too weak to survive, unite by placing them above strong colonies over excluders. Let both queens work in common until after the start of clover when the poorer queen is to be removed or the upper bees and queen shaken below.

I have found usually that colonies requeened in early spring produce more honey than do those with overwintered queens. I would suggest,



therefore, instead of buying queenless packages to bolster weak colonies with old queens, that queenright packages be united with such colonies in the manner shown above, utilizing both queens in building up for the clover flow.

In each of the above schemes one of the queens is to be confined to one or two lower stories, Demareeing if necessary to prevent overcrowding of the brood chamber and swarming. In these experiments I have not found Demareeing necessary as all colonies were of non-swarming Italian stock and were provided with an ample supply of drawn super combs, shade and top ventilation.

Indiana.

Report of Iowa Apiarist

The annual report of the State Apiarist of Iowa for 1945 is now available. It contains nearly 100 pages of which about half are devoted to the discussions at last year's conference of agronomists, horticulturists and others with the honey plant committee of the National Federation which was held at Atlantic, Iowa, July 11 and 12. The conference report will be issued separately, but those who wish to secure the report of the Iowa Apiarist with it can do so by writing to F. B. Paddock, Ames, Iowa. The report is sent free on request. Problems of pollination are the dominant feature of this year's volume.

Dr. A. Z. Abushady in United States

A letter has just come from Dr. A. Z. Abushady who formerly was editor of the Bee World and later returned to Egypt where he edited the Egyptian bee magazine, "Bee Kingdom." He has arrived in New York with his two children and has established himself there in an apartment.

We are sure that all American beekeepers will welcome Dr. Abushady to this country although his primary interests undoubtedly will be in his chosen scientific profession which will undoubtedly change his interest in beekeeping.

Dr. Abushady had the misfortune to lose his wife just a few weeks before his departure from Egypt.



A wire muff with open mesh cloth ends for separating queens from attendants and for use during marking or clipping.



Two queens with marked thoraces. Left queen is the choice one but the right one will last a season.

HOW TO MARK A QUEEN BEE



Clipping the queen.

THE majority of queens in commercial use are not marked in any way and often there is little value in marking. Replacement should not be based on age but on performance and a queen that is not doing well may be more than a year old or less than a year old. In stock selection however marking is a prime essential.

Clipping is used to serve as a mark. The wings on one side of the queen are clipped for odd years and on the other side for even years. Some clip to prevent swarming, but clipping has little effect on swarming since the bees merely wait until virgins emerge and swarm with a virgin, leaving the clipped queen behind.

Marking the thorax is now becoming more often used than clip-

ping. Anesthetized queens are easily marked, using carbon dioxide gas. But this method cannot be commonly used and is seldom except in experiment. Queens may easily be separated from their attendants if they are in queen cages by the use of the wire muff. Then the queen is held over the ball of the left thumb or between the first fingers of the left hand and the wings clipped or the marking color applied with the right hand. Small embroidery scissors are good for clipping. Any quick drying enamel or a bright finger nail polish will do for marking. Use the softened end of a match for a dauber. Apply the color evenly and firmly to the top of the thorax, holding the queen a few moments to allow the color time to dry.

Marking does many things. It shows when supersedure happens; how long the queen lives; the marked queen is easily found; selections are speeded up. Marking should be done when the queens are introduced to save the time of finding them when they are in the colony or under supers.

Jasper Knight

Just as we go to press we learn by wire of the loss of Jasper Knight, Montgomery, Ala., from heart attack. He was trying to save a truck from a burning work shop and the strain was too much. All cages and equipment were lost in the fire. Another of the long-time shippers is gone. We shall miss him and so will the entire industry. The sons will likely carry on.

C. E. Sanborn

C. E. Sanborn, head of the Entomology Department of the Oklahoma Agricultural and Mechanical College recently died. F. A. Fenton is now head of the department.

Second-Hand Package Cages

One of the inspectors of a Southern state has asked us to warn our subscribers relative to the re-shipment of package cages to breeders. In some states and probably in most of them, the use of second hand cages is not allowed and we would suggest our readers first get in touch with both the breeder and the inspector of the state involved before sending back such cages which, at best, are of dubious value.

G. M. Doolittle

1846-1918

By Kent Pellett

G. M. DOOLITTLE was not the originator of the system of queen rearing in general use today, and with which his name is associated.

Other men had already noted that queens could be reared from worker brood when placed for control in in queen cells and were groping over queen rearing.

A number of ideas were advanced. W. L. Boyd had written *Gleanings in Bee Culture* that he had succeeded in rearing queens by placing worker larvae in acorns or the half built queen cells to be found in every hive. Editor A. I. Root had suggested that queen cells might be made by dipping a rounded stick into melted wax.

But nothing came of such ideas until Doolittle adopted them and began raising queens in large numbers by his own hands. Then he popularized his methods through his book, "Scientific Queen Rearing." His system was so practical, his explanation so detailed, that little has been added since his time.

Doolittle began keeping bees in 1869 at Borodino, N. Y., the town where he spent most of his life. He started with two colonies, which cost him thirty dollars. Sugar for wintering cost him another five dollars, but that was the extent of his original investment. His bees furnished all the money for future expansion.

When he had built up to 67 colonies he gave up general farming to devote himself entirely to bees. In 1877 he grossed almost \$2,500, the largest return of his life. After that, he averaged \$1,200 a year. With this income he built a good home, paid for a thirty-acre farm, put up the necessary buildings, and within fifteen years had laid by enough money to keep himself and his wife the rest of their lives.

He always advised young men entering beekeeping to start small and make their bees pay their way.

At one time he had an apiary of 250 colonies, but in his later years he seldom had over one-fifth that number. He said that 100 colonies was all a man could care for properly. He worked fifteen hours a day in caring for his apiary, but made his own sections and did other work bee-

keepers now leave to their supply houses.

Doolittle was primarily a comb honey man. He sold sections enclosed in glass, "the handsomest and most taking honey package the world ever saw," and developed a market for his honey in New York City.

In the beginning he subscribed to all the available bee magazines and bought the books he could obtain. He attributed much of his success to them.

Only a year after he began keeping bees he wrote his first article. Within a few years he was writing for seven different magazines and keeping in touch with a large number of correspondents.

He had little schooling and complained that he was a poor writer. He said his writings were only jottings which the editors had to rewrite before publication. If so, few beekeepers had more followers or influence than he. His mind was a veritable storehouse of beekeeping knowledge.

"Doolittle is generally right," was a saying among beekeepers of his day.

He began rearing queens the year after he entered beekeeping. He and a partner raised queens for the farmers of their neighborhood, introducing the queens into their apiaries. He some times sold 500 or 600 queens a year.

Doolittle published his book, "Scientific Queen Rearing," in 1889. His system was quickly adopted by others and he became known as the founder of commercial queen rearing. The job he had done was so complete that he never felt the need of revising his book in any way.

* * * *

A man big in both mind and body, Doolittle had a capacity for self-sacrifice found more frequently in women than in men.

When his father became crippled he cut down on his beekeeping operations in order to give him the care he needed.

He supported a poor widow to save her from the poorhouse, after the town failed to provide for her.

As a young man he fell in love with

a girl who was crippled, would not be dissuaded from marrying her, said he loved her all the more for her affliction.

They apparently led a happily married life. He said that she was of much help to him through the years. Then in 1912 she suffered a stroke of paralysis. Until his death he cared for her every want, even declining to leave her to go to beekeepers' conventions.

He sold all his bees except for five colonies, just enough for a little relaxation "from the heavy cares thrust upon me."

And in the end she outlived him.



Mrs. Killion in Altrusan

Current issue of the *Altrusan* contains fourteen features, one by Elizabeth Killion of Paris, Illinois, wife of Inspector Killion. She tells her story of her business, with her husband, as a beekeeper. "After twenty-five years as beekeepers," she says, "we can say that we have found riches in abundance, not in dollars and cents values, but in happiness in our work. What was once an interesting hobby has developed into our dream of life's work. We have specialized in the production of fancy section comb honey. My part of the work is with the equipment for the production of the crop and its finishing for market. It is doubtful if one could engage in an agricultural occupation that offers more education, health, and happiness than beekeeping."

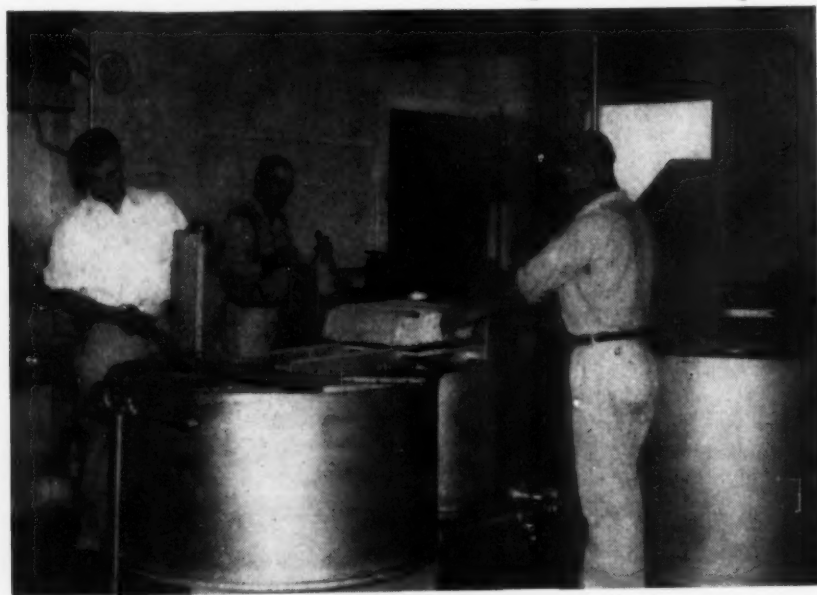
Extracting the Honey Crop

By Roy A. Grout

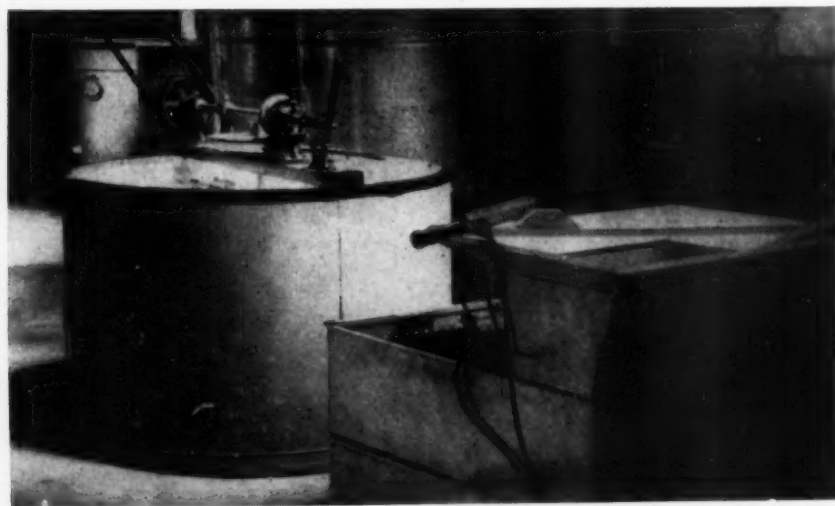
A warm comb can be uncapped by a cold knife, such as Bingham invented, or, if the knife is immersed in hot water, it can be used when the combs are not warm. However, most will find the steam or electrically heated knives or planes best suited to their operations. Large beekeepers have found power uncapping machines more desirable for their needs since they often must depend upon

inexperienced help which they can pick up for this summer work. While the steam heated knife or plane in the hands of an experienced operator can uncup many combs, the inexperienced operator usually will do a better job and perhaps uncup more combs with a power uncapping machine.

The combs are uncapped over a receptacle into which fall the cappings and the honey removed with them.



Uncapping into a centrifugal cappings drier which whirls the cappings dry during the day. (Photo courtesy Thayer & Sons).



The Brand cappings melter separates the beeswax and honey in one operation. Note the steam-heated uncapping knife and large radial extractor.

The problem which now is presented is the separation of the cappings from the honey without injury to its color, flavor, and aroma. In general two methods are used: Draining by gravity, centrifugal force, or pressure; and heating the cappings so that the melted wax will separate from the honey. A few beekeepers have used ingenious methods of letting the bees clean the cappings of honey after they have been drained.

An early method and one still used extensively is to allow the cappings to fall into an uncapping can with a screen midway of the can to catch and hold the cappings while the honey drains away. Large operators use long shallow boxes or tanks of this kind sufficient in size to hold several days' cappings. In all cases the cappings should be stirred well and allowed to drain for at least 24 hours; the honey obtained is not injured in any way and can be added to the balance of the crop.

When cappings are drained or dried by centrifugal force, usually the beekeeper uncaps into some device like those just described and much of the honey drains away by gravity. Then the cappings are put into a centrifugal drier, the honey extractor often being equipped with screened baskets for this purpose. Some operators use a specially constructed centrifugal drier and uncup directly into it; at the end of the day, the cappings must be removed from the drier and placed in containers for storage until they can be melted.

Centrifugal driving of cappings does not remove all of the honey and it is necessary to use some melting device to separate the beeswax from the remaining honey. Known methods for doing this result in the honey being badly discolored and the flavor and aroma are much inferior. Experience has shown that cappings which have been drained by centrifugal force still contain about as much honey by weight as the weight of capping wax obtained.

When cappings are drained by pressure, the combs first are uncapped into a container and a goodly portion of the honey drains by gravity from the cappings before being pressed. Usually the container is a basket formed of wood,

well bound with metal hoops, which later is set under the screw of a press similar to a small cider press. Some have used a pair of heavy automobile springs between the heavy cross bars at the top and the jack screw, permitting the springs to be compressed when pressure was applied to the screw. Thus the operator could leave the press for a period of time, the springs continuing to furnish pressure. When removed the cappings are in the form of a cheese which can be stored conveniently for melting later on. Compressed cappings frequently contain as much as 50 per cent honey by weight; cappings which have been well stirred and drained by gravity in a warm place for a sufficient time contain no more honey than cappings that have been dried by centrifugal force or by pressure.

Drained cappings are either melted over an excess of water with the contained honey being wasted, or in a steam heated melting device in which the honey, if recovered, is always discolored and seriously injured as to flavor and aroma and should not be added to the balance of the crop.

The first melter commonly used to melt cappings as they fell from the uncapping knife was the Peterson cappings melter. The sloping surface of the bottom of the melter is jacketed with hot water which melts the cappings and heats the honey which runs out at the lower end into a separating can. This type of melter tends to overheat the honey and the sloping surface soon becomes coated with slumgum with which the honey comes into contact, making it unsuitable for adding to the balance of the crop.

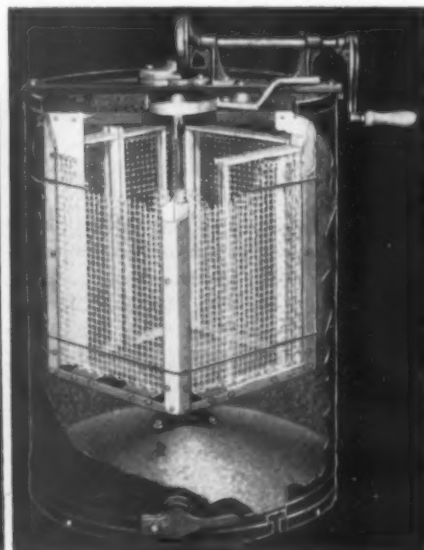
The principle employed in the Brand cappings melter in time will be held to be an outstanding development in American beekeeping. The cappings, falling from the uncapping knife, are floated on the surface of the honey removed with them until they touch a steamheated grid suspended above them where they gradually melt. The source of heat does not come into contact with the bulk of the honey which is only heated moderately and which separates from the melting wax. The honey level is maintained several inches below the heating coil (which can be raised or removed for cleaning) with the excess



Uncapped combs draining while racked over a tank which also catches the cappings as they fall from the knife.



The 50-frame radial extractor equipped with Rosedale winged comb supports which protect the combs from breakage and speeds up the operation.



(Left) The Merry-Go-Round, a radial comb-draining rack for holding the combs until they are put in the extractor.

(Right) This small extractor holds four large combs or eight shallow combs and harvests the crop for the small beekeeper.

(Photos courtesy the A. G. Woodman Co.)

honey overflowing during the operation. As the liquid beeswax collects at the level of the grid, it is run off into molds. Thus at the end of the day, the wax is left in a cake suitable for marketing and the problem of storing cappings and melting them later is eliminated. If properly operated, the honey need not be affected as to color or flavor and in commercial outfits is added to the balance of the crop without injuring the quality.

After the combs are uncapped they are placed in some device for catching and holding the honey which drips from them until they are put into the extractor. Sometimes this is the same device into which the cappings fall for draining; others use a box or tray, sometimes mounted on rollers, between the uncapping device and the extractor. The revolving comb rack, called the Merry-Go-Round, is an ideal piece of equipment when the large radial extractor is used. It provides for racking fifty combs in five numbered segments making it easier for the beekeeper to return the same combs, when extracted, to the supers from which they came.

Some may find it practical to uncap and place the combs directly into the extractor where they are extracted before more are uncapped. Others may have two extractors, filling one while the other is operating.

Whenever practical, supers of honey from different plant sources should be kept separate and extracted at different times. It would be extremely unwise to extract a dark-colored or strong-flavored honey along with a light-colored or mild-flavored honey, which would result in honey of inferior quality commanding a lower price in a normal market. Sometimes the honeys are mixed in the supers; this may be due to neglect of the beekeeper in not removing supers of one kind of honey before another kind of nectar is gathered, but there are conditions when this is unavoidable.

The small beekeeper has available to him the two and four-frame basket-type extractors in which the frames are reversed by hand, and the two and four-frame reversible honey extractors in which the baskets swing to reverse the combs. Time and labor facilities must dictate whether equipment of this kind or the more expensive larger radial and pivotal-reversible extractors should be used. In the days of outyard extracting, the smaller extractors were in common

use and C. P. Dadant has reported 5,000 pounds of honey removed from the hives and extracted in a single 10-hour day with a non-reversible four-frame extractor turned by hand with four men working under ideal conditions. However, where circumstances dictate power-driven equipment in the central extracting plant, the large radial extractor or other power-driven types are preferred.

The radial extractor is constructed in 30, 45, and 50 frame sizes, made strong and durable for many years of service. Depending on the temperature at extracting time, whether the combs of honey have been warmed, and the thickness of the honey, the time required for extracting a loading of combs is from 15 to 30 minutes, with the average time about 20 minutes. The larger radials will extract from 5,000 to 7,000 pounds of honey in about an 8-hour day. The shaft speed should be in the vicinity of 300 R. P. M. for the larger sizes and the friction drive allows for gradually increasing the speed of the reel until it is turning at approximately the same speed as the drive shaft. Difficulty sometimes is experienced with breakage of new combs, particularly when they are warm, thus care should be taken in starting the extractor so that it gradually increases in speed. Much of this trouble has been eliminated by the installation of the Rose-dale winged comb supports which firmly clasp the sides of each comb in the extractor, thus minimizing breakage.

The pivotal-reversible extractor is preferred by some to the radial and, when power driven, usually is obtained in the 8-frame size. The combs are automatically reversed while the machine is running and little breakage occurs since the combs are contained in baskets. It is claimed that this type of equipment will extract honey as fast as the radial and is less likely to break the combs when the honey is heavy.

Queens Go To France

"My Weekly Reader," children's newspaper of Columbus, Ohio, sent to us by Kenneth Hawkins of the G. B. Lewis Company, gives the story of queens flown to France last October, in a C-54 plane for the use of French beekeepers. The background of the shipment was the need for bees in pollination. French farmers asked the United States for the help.

My Way To Install Packages

By M. G. Eldred

Acting on your suggestion that I write a short item about our method of installing package bees, will state, that in all fairness to the originator of the idea, Mr. L. P. Baker, of Glencoe, Illinois, Deputy State Inspector must go the full credit as I did not originate any part of it, but have used the system with one hundred per cent success.

When I receive package bees from the shipper, I remove the crating material and place each package over an old dishpan or similar receptacle. I paint the screens with warm syrup to give the bees a good feed, then stack the packages and cover (if the weather is cool), until the next morning.

The next day the packages are taken to the Apiary (the hives having been previously prepared) place each package over its pan on its side and with a dipper pour warm syrup over the bees shaking them well so that all the bees are covered with the syrup. Remove the cage cover, syrup can and the caged queen; dump the bees into the hive (they cannot fly) swash the queen cage around in the syrup until both the queen and the retinue of bees are thoroughly saturated. Pry off the screen on the queen cage and drop her into the crawling mass of bees. Put on the hive cover and if you haven't already done so, plug the entrances. After dark we remove the entrance plugs.

There is absolutely no drifting, the bees are gorged with syrup and by morning they are all organized and ready for work.

Last year my packages were installed on April 30th and when inspected 15 days later, all the queens were laying and there was plenty of brood.

Many a time I have found queens that had not been liberated after being in the hives for two weeks when we used the old system of queen candy plugs.

Baker is a short cut artist and this system of installing package bees is not only quicker and easier, but 100 per cent foolproof and weeks of valuable time are saved, which is such a vital factor in the North at this season of the year. TRY IT.

Illinois.

UNORTHODOX BEEKEEPING

By Clyde N. Wood

TO begin with I have nothing to sell, and if I make any statements that tend to hurt anyone's feelings or business just consider that they come from only a "dub" beekeeper and please forgive me.

You can see by the picture of my hives (taken the last of August and after most of the honey was off) that they are not conventional. My frames are about ten inches deep and shorter than the Hoffman frames. As bees normally cluster in a spherical shape, this design gives them a more natural brood cluster; and in the winter as they work up on the stores of honey, my bees have two inches of honey left at the time that those in regular frames would come to the top bar.

The piazza effect on the front of these hives gives a degree of protection to the bees coming in during cold or windy weather. Also gives me a chance to screen them in during the winter when I store them in the cellar. I have a one-half inch hole toward the top of the back of this piazza in addition to the regular entrance. This gives the hive ventilation in case the regular entrance gets plugged with ice before the bees are put in the cellar, or after they are taken out in March. Also prevents suffocation if regular entrance should get plugged with dead bees during the three and one-half months that the hives are kept in the cellar.

The telescoping cover gives an air space for upward insulation during cold weather, and as supers are added in hot weather it gives shade, with a chance for air circulation around the top super.

Have a glass in the back of the hive, with a sliding door to shut out light and cold. Through this glass, I can see at a glance how the colony is building up during May. Also during the honeyflow, I use glass cut from old car doors and winshields instead of the inner cover. About every evening during the honeyflow I go among the hives and by lifting the hive cover I can see how thick the bees are in the top super. This gives me a chance to add more supers just before the bees decide that the hive is not going to be large enough; by another week. These hives use the regular supers. I build the hives myself, just for my own use.

As would be expected, a guy that would fool with these odd hives, would not keep the right kind of bees. I hunted wild honeybees quite a bit before I started to keep bees. In this section we usually cut bee trees in



Not the conventional hives most of us are used to. Piazzas give a degree of protection to bees coming in in cold or windy weather.

August or September. Most of the swarms of yellow bees (kindly refer to the apology at the beginning of the article) at this time would have a lot of brood and little honey. The black ones appeared to have ceased extensive brood rearing, and were more apt to have a good supply of honey for the winter that was coming. My idea was and still is, that bees that were raised for generations in a warm climate, were not warned by nature to stop extensive brood rearing and to get a good supply of honey for the bleak months ahead. Also practically all wild bees that I have taken up that showed that they had wintered in the tree, were very dark in color. I started beekeeping by taking up wild darker colored swarms. Later, feeling that dark bees were better for this climate, I got a very few Caucasian and Carniolan queens. I could not see that these helped me, and they seemed to swarm more. For several years I have kept records of honey production and swarming of each colony. During this time I have increased and requeened from those that produced the most honey, the nicest comb honey, and with the least swarming tendency. These bees with me are apt to be very dark colored with relatively wide white bands and a little sort of bronze color between the thorax and abdomen. Have not tried to breed for gentleness. My bees are rather spiteful when one walks around among the hives, but I don't feel that they are bad when I open the hives. Have never had American foulbrood; maybe because of tough bees and maybe because of fool's luck.

I use no queen excluders nor queen traps on the hives, and don't regularly cut queen cells. In 1943 I had five swarms out of twenty-seven colonies. These five were from colonies that I had crowded for room on comb honey so as to replenish, with what

I called my best stock, three empty hives caused by uniting swarms, with failing queens, in the spring; and one empty hive caused by the only swarm that ever died in my cellar. The other swarm was united with one that was not coming too good.

I don't clip any queens and don't requeen at regular intervals. Many of my colonies have superseded without swarming, as evidenced by open cells in lower extracting body, and if I requeened at regular intervals I might have destroyed some extra nice and young queens. Will admit that each spring I am caught with a few failing queens. Some may feel that these colonies with open queen cells had swarmed without my knowing it. I have a gasoline station, garage and general repair shop with residence over it. My bees are so near that some of us would hear them if they did swarm. Aside from letting nature take its course, I requeen a few colonies that are unproductive or that have too much tendency to swarm, by forcing them to raise a queen from a colony that suits me better. What suits me are colonies that put up a good lot of honey with no manipulations except to put on or take off supers; and the majority of my colonies have done just that for the last three years.

As I look at it, my system is selecting the best of nature's best for this locality, and keeping them in as natural a way as I can; and yet get what surplus honey I can, with the least trouble from swarming. Although real beekeepers class my system as "backlot beekeeping" I have obtained personal satisfaction from:

1. Relatively little swarming without regular queen cell cutting.
2. Extremely good luck in wintering.
3. Have taken first prize on comb (Please turn to page 239)

Bakelite Varnish For Extracting Equipment

By W. Rei Robbins,

N. J. Agr. Exp. Station, New Brunswick, N. J.

DURING the past season galvanized iron extracting equipment such as extractor and uncapping tanks have been coated with Bakelite Resin Varnish to prevent the contamination of honey by the metal surfaces. This method has been extremely successful and offers a way to continue equipment in use even after rust spots appear through the galvanizing and when replacement is difficult or expensive.

The metal surfaces to be treated were first thoroughly cleaned first by scrubbing with warm water to remove all traces of honey, then with hot water and a detergent to remove any remaining films of wax. The hard-to-get-at places such as cracks, perforations, and corners in the wire baskets of the extractor were heated with a blow torch to burn off any remaining wax, honey or organic matter. The torch method is not necessary on easily accessible flat surfaces. Lastly, rough spots were brushed with a steel wire brush.

When thoroughly dry the metal surfaces were covered by flowing on a coat of No. 74 Bakelite Resin Varnish using a small paint brush of a size suited to the size and shape of the surfaces to be coated.

The varnish dries overnight and is hard in 24 to 48 hours. A second coat can be applied after the first is dry for added protection, but one coat completely covering the surface and carefully applied has been found to satisfactorily protect the surfaces.

After thoroughly dry no odor of the varnish is noticeable and no taint to the honey has been detected.

This material has been used by the writer to protect metal surfaces from distilled water for storage tanks where only a fraction of a part in a million of dissolved metal is objectionable. It has been found entirely satisfactory for this purpose. Steel drums coated with this material have remained in satisfactory service for more than five years. Pre-war corrosion tests by the Navy have shown this varnish to have a very high de-

gree of salt water corrosion resistance.

In view of the successful experience with this material and the lack of any apparent disadvantages to date it seems worthy of trial by those who may wish to protect their honey against metallic corrosion.

The writer has not used it in heating tanks but it is not thermoplastic and there is no reason to believe it will not be satisfactory for temperatures up to at least that used for honey bottling.

This varnish can be applied by air spraying if desired when properly thinned with the special thinner available from the manufacturer.

Brushes can be cleaned either with the thinner or with xylene (xylol).

The varnish is obtainable from the Wipe-on Corporation, 105 Hudson St., New York 13, N. Y.

THE MIGRATORY PROGRAM

By Herbert B. Addleman

HONEY producers from the northern sections of the country are finding it more and more attractive to pick up a load, or more, of bees, and take them to the warm southland, where the owner can enjoy the balmy breezes and sunshine, that his southern friends have been enjoying in former years.

However, this situation is not met with open arms from the beekeepers, who earn and make their living in the southern sections of the country. Many resent the sudden influx of bees into their areas because they fear an over-crowding of what they feel is morally their territory. In this respect we can not blame them, nor can we disregard their anger, when they, in turn, decide to move a few colonies to the northern sections of the country and are met with prohibiting laws that require such rigid certificates of inspection that no honest apiary inspector would sign

his name to the document. The honey producers in these states have such laws to protect them from that terrible disease known as American foulbrood. But the sad part of the situation is that these states are usually infested with the disease that they are attempting to keep out, and are merely using this as an excuse to keep down out of state competition.

Stating the question in as simple a manner as possible it is nothing but discrimination and illegal interference with interstate commerce.

Now that we have the situation fully exposed, or shall we say openly stated, let us look into the pro's and con's of the situation. The beekeepers that migrate to the South usually go for increase, and what little honey they can catch early in the spring. Much of this honey will be from the citrus crops, and the old timers will tell you that it is difficult to overstock a citrus location. If the weather is such that the bees can work at all there is usually plenty for all. I have a location in the orange district of Southern California, and although there is close to two thousand colonies of bees in a two-mile diameter, it is the best producing apiary that I have. Thus showing that oranges will support many colonies of bees if the bloom and weather are anywhere normal. So taking this into consideration, along with the fact that the northern producers are usually breaking their bees up into nuclei, and are making all haste to remove to their summer locations in the North, I hardly believe they are hurting the southern producer to any large extent. If they were to operate their bees on all the bloom through the entire season then they would indeed be a menace to their southern competitors. Now if we follow through the same course of events, only with the situation reversed, and we find the southern producer moving loads of bees into the honey producing sections of the country where the main flow is from alfalfa, or the clovers, and is of short duration and once over is the last chance for the year, we find a different story. An alfalfa or clover location can be overstocked easier than an orange location, as this one flow is the main source of honey. This is the one and only chance a northern beekeeper has to make it, while in the South the orange flow is followed by others that at least will give enough for a good fill-up to winter on. However, this does not justify the establishment (Please turn to page 248)

Proper Strain of Bees For Good Honey Crop

By L. F. Dexter

ALL productive colonies are headed by good queens and, it is on these colonies that the future of your beekeeping rests. They mean either success or failure, profit or loss. A weak strain of bees never becomes highly productive regardless of numbers. The key to successful production is the selection of your breeding queen. That is your starting point.

Your breeders must be the best obtainable, they must come from a well-fixed strain of a pure race. This qualification sometimes is difficult to find because so many poor queens have been introduced to once good strains. It appears that too much emphasis has been placed on the number of queens reared and not enough on the quality of the queens reared.

The breeders you select from this fixed strain of bees must definitely prove their ability to lay the largest number of eggs possible. Their eggs must hatch and develop into firm sound brood and the bees must be uniform in size and color. The queens reared from these breeders will become your foundation stock to be bred into a single strain.

All queens reared from this stock must produce bees that will winter well under normal conditions. If dysentery should appear in the spring and it is not the result of poor stores, such as goldenrod, aster, or honeydew, it should be recognized as a weakness in the strain and all queens from colonies showing it should be replaced. This trait must be bred out by using cells grafted from the stronger and more productive colonies.

All colonies must be reasonably gentle. They must build up well in spring and keep a compact brood nest. All combs must be well filled with either eggs, larvae, or brood at all times within an ever-expanding brood nest.

Many strains of bees appear to

build up well in the spring but do not have the fortitude to withstand a long honeyflow. They just do not live long when the honeyflow gets under way. It is true that they will rear additional brood during the flow but these young bees cannot take part in the harvest because they develop too late. When such colonies do not meet the test a good young laying queen must be introduced at once. Colony morale seems to be linked to the condition of the queens.

When weakness in the strain appears in the yard where young queens are being mated it would be wise to place a drone trap in the entrance of the hives showing this weakness and to keep the drones from mating with young queens.

When breeding for size queen breeders should not overdo it. A very large queen may be the victim of some glandular weakness. The bees should be uniform in color to permit the beekeeper to tell his own strain. All queens and bees in the breeding yard must show definite superior physical characteristics. They must have a well-developed tracheal system, to permit them to withstand long field trips and a large enough honey stomach to make the long trips practical. The size and shape of the pollen baskets and the combs are also important. The shears and spines add to the effectiveness with which combs are cleaned and in readiness for the young vigorous queens.

The size and shape of the head is important because the tongue and antennae are parts of it. Good queens generally are large and have a well-shaped head and thorax and a long slender abdomen. The tips of the abdomen should not be too pointed. The body members are loosely coupled and the queen should stand high on the combs on long well-formed legs. A good queen does not appear nervous, nor does she run on the combs. In short, she must look and act like a real lady at all times.

South Carolina.

SULFATHIAZOLE TREATMENT

By Henry Perkins,
Senior Apiary Inspector,
Los Angeles County.

I have treated five colonies of bees with sodium sulfathiazole for American foulbrood, covering a period of eight months' time. Three of these colonies have shown no return of the disease after a lapse of six to seven months. Two show recurrence recently. The two that recurred had a surplus of surplus honey at the time the treatment was given. The other three were practically without stores. From this it would appear that it is useless to treat a colony that has a considerable supply of honey, presumably infected with American foulbrood spores.

I also tried increasing the strength of the dosage. My observations seemed to indicate that one-half gram of sodium sulfathiazole per gallon of syrup is the proper dosage. I have fed it as strong as four times that amount with less positive results.

My opinion, to date, is that one should not regard an apparent cure as cured until a time lapse of two successive seasons, plus the spring inspection following, shows no recurrence. The apparent improvement in the general appearance of the colony in each case has been very noticeable. The bees look and act brighter and more active after treatment. The brood also seems to be more solidly capped as though the infant mortality was considerably lower.

Such experiments as I have conducted this spring on European foulbrood, which as yet are far from conclusive, seem to indicate that the sulfathiazole treatment is of very doubtful value for this disease.

INEXPENSIVE HIVE STANDS

Use two pieces of short post or dimension lumber about thirty inches in length laid on the ground, each piece extending several inches to the sides of the hive. Set the hive on them. I find them a handy place also to set the brood comb, leaning it against the side of the hive while working. Treat the pieces of lumber with creosote and they will last many years. The ants and termites will not bother them much.

Thomas J. Osborn,
Oklahoma.

Wings of Agriculture

By Kyle Jay McClaugherty

*"Full many a flower is born to blush unseen
And waste its sweetness on the desert air."*

WILL you come with me into a field of yellow clover? The clover is in full bloom. As we stand in the field we watch the vast expanse of tiny yellow blossoms swaying rhythmically to a warm balmy breeze. A sweet fragrance comes to us and we feel our very being expand. You will notice honeybees flitting from flower to flower. Each little golden bee has four wings which make 190 strokes per second. These are indeed the wings of agriculture. That brings me to my purpose which is to show you the value of honey bees to agriculture.

A bee only visits the flower of one species at a time. When a bee is working on clover it will fly over field after field of blossom without even stopping on a single flower. This is highly important for correct cross-pollination. A noted British scientist J. Arthur, estimates that the bees from one colony "will visit more than a quarter of a million blossoms in a single day." Perhaps some will say, "There are other pollenizing insects." That is true, but it is also true that the honeybee is the only insect that can pollinate the plants in our changed agriculture program of large areas devoted to one crop. In a period of 43 hours an average of only nine insects per hour were found on the blossoms of alsike clover. When honeybees are plentiful one can count up to 300 in a single hour upon the same blossoms.

There was a time when farms were small and a variety of crops were raised. At that time there was much more uncultivated land and naturally many more insects. Today bees are being killed at an alarming rate by commercial spraying. Because of this plight to agriculture it is vital to give more thought and consideration to increasing and protecting bees—the wings of agriculture. Today and in future, whole farms, yes, even whole sections of a country are specializing in one crop. The honeybee is the only insect that man can economically produce in sufficient numbers to pollinate great sections devoted to seed

production, fruit growing, or vegetable raising. The value rendered in agriculture by the honeybee must be a part of the education of every future farmer.

I want to show you the great value of honeybees in seed production. Bees have no influence upon wind pollinated plants. Corn, wheat, oats, and grasses are some examples. Practically all the legumes such as clovers and alfalfa require insect pollination and the use of the legumes is the most economical way to increase the fertility of our soil. The production of seed has become a very hazardous business which can be seen from the fact that the federal government has appropriated 47 million dollars in the past two years to subsidize the legume seed production. The National Council of Farmers Cooperatives recognize there is something basically wrong. They have asked the Budget Bureau for one half million dollars annually for legume research, \$150,000 of which is to be used to study the value of the honeybee in pollination.

It has been demonstrated at an experimental station in the state of Ohio that honeybees increase clover seed production fifteen times. That has a lot of meaning when we realize that in Ohio a ten year average for alsike clover was only one and six tenths bushels per acre. Let us pause here long enough to return to the field of clover which we visited in the beginning, whether that field of clover is yours or mine the scientific truth is that the amount of seed harvested from that field can be increased fifteen times by having plenty of honeybees to pollinate all blossoms.

The committee that is working on our National Conservation Program estimates that 336,666 tons of legume seed are needed. The 1946 supply of legume seed is estimated to be about sixty per cent below normal requirement. One of the major factors causing this scarcity is the lack of bees for sufficient pollination. In 1945 it was estimated that there



Kyle Jay McClaugherty

was only about one colony of bees for every three farms in the United States. Most authorities in agriculture agree that two is the minimum number of colonies per acre of legumes for proper pollination. The United States Department of Agriculture has for the first time in the history of our country, asked for an eight per cent increase in the number of colonies of bees in 1946 not for honey production but for pollinating service. By increasing the number of bees in the vicinity of our legume fields we can help solve the seed shortage and incidentally will have gone a long way toward solving the biggest problem in our soil conservation program.

The fruit industry was the first branch of agriculture to recognize their absolute dependence upon the honeybee. Fruit growers sprayed their trees while in bloom with poisonous chemicals which killed the honeybees in the entire locality. Today as a hideous monument to such ignorance orchard after orchard may be seen which have been abandoned or cut down because as the wings of agriculture fell to earth so did profitable fruit growing. Last year over 7,000 colonies of bees were killed by spraying in the state of Arizona. The same careless, ignorant men who killed the bees are now buying bees to pollinate their fruits and vegetables. Fruit growers have awakened to the fact that honeybees are as indispensable in growing fifteen com-

Paton Bulk Honey to R. B. Willson



R. B. Willson

John Paton announces retirement from the distributing of bulk honey and the transfer of this business to R. B. Willson, Inc., 630 Fifth Ave., New York 20. Paton will concentrate on the marketing of Golden Blossom Honey. Willson will still remain with Paton in a consulting capacity.

mercial fruits as are the fruit trees. Dr. E. F. Phillips, of Cornell University, says, "Of all the insects which serve the fruit grower, none is more efficient than the honeybee."

The vegetable industry has more recently discovered the value of the honeybee. It has been learned that over 35 commercial vegetable crops are dependent upon the honeybee. On an experimental farm in the state of Michigan some cucumber blossoms were covered with wire cages which excluded the honeybees. Those set only about three fruits to each thousand blossoms and those were seedless. The blossoms that were not caged and that the bees visited often bore fruit abundantly. J. M. Amos, a specialist in entomology at the University of Delaware found that the value of lima beans could be increased \$11.36 per acre by having sufficient bees for pollination.

One could go on and on showing the important role of the honeybee in agriculture. However, let us return to the field of clover which we were in when we set out in this talk. Before us is an ocean of blossom and upon one tiny flower we see a bee clinging, and now we realize that because agriculture is dependent upon honeybees for four-fifths of its pollination services, honeybees are the true wings of agriculture. While thus we stand, our minds review in swift succession the truths I have brought to you. Namely, the value of bees in seed production, the value of bees in fruit growing, and the value of bees in vegetable raising. Further, I have shown that the honeybee is the only insect that can be produced commercially to meet the needs of specialized crop production; and that there is also a serious shortage of bees and further that the density and constancy of the bee population over

a period of years is a real economic interest to all farmers.

Now let our eyes follow the bee as it leaves the yellow, swaying blossom and rises with a load of pollen equal to its weight and travels at the rate of fifteen miles per hour and is lost from our sight into the deep blue horizon. Let us stoop to the earth and pick up a handful of moist, warm earth, for a farmer loves the feel of his soil, and as the soil sifts through our fingers on its way to earth again, let us think of it as the soil we must enrich, for we realize that within the fertility of our land lies the ability of nature to grow foods that will produce a strong, vigorous race of people.

Fellow farmers, let us look back to the horizon where the lone bee vanished from our sight for now we know bees perform a vital part in the chemistry of our soil. For it is estimated that 100,000 species of plants would vanish into oblivion without bees to pollinate their blossoms. Yet today it is regrettably true that "Full many a flower is born to blush unseen, And waste its sweetness on the desert air." We must be more than dirt farmers. We must use bees, the wings of agriculture, to produce more and better legume seed, with which to enrich our impoverished soil. We must use honeybees, the wings of agriculture, to grow vegetables and fruits which have the correct food values, though these things are not our ultimate goal; but they are a worthy means in helping us to live more fully, deeply, and richly.

Colorado.

Unorthodox Beekeeping

(Continued from page 235)

honey at the Vermont Beekeepers' Convention.

4. In 1941 and 1942 my average per colony production was more than twice that for our state of Vermont, and in 1943 was over two and a half times the Vermont average, according to the reports from the Department of Agriculture.

If this article gets by the censor so that you read it, I for one would like to read other articles by "backlotter," for I sometimes feel that beekeeping has been standardized and commercialized to the extent that a different thought or method dare not be expressed.

Vermont.

Airplane Seeds Clover Acreage

William Carlile, one of our operators, and Fred H. May of Meredosia, Illinois, call our attention to an item appearing in the current press about the seeding of 550 acres of sweet clover, covering a half mile long 40 foot swath in 20 seconds. Ordinary methods would not have permitted sowing this wet and muddy acreage for a month. Farmers and farm instructors at the University of Illinois were among the spectators who watched the usual use of the airplane on the A. T. Sumner farm, 13 miles south of Sheldon, Illinois.

Edward Sumner said the cost of seeding by plane was 60 cents an acre,

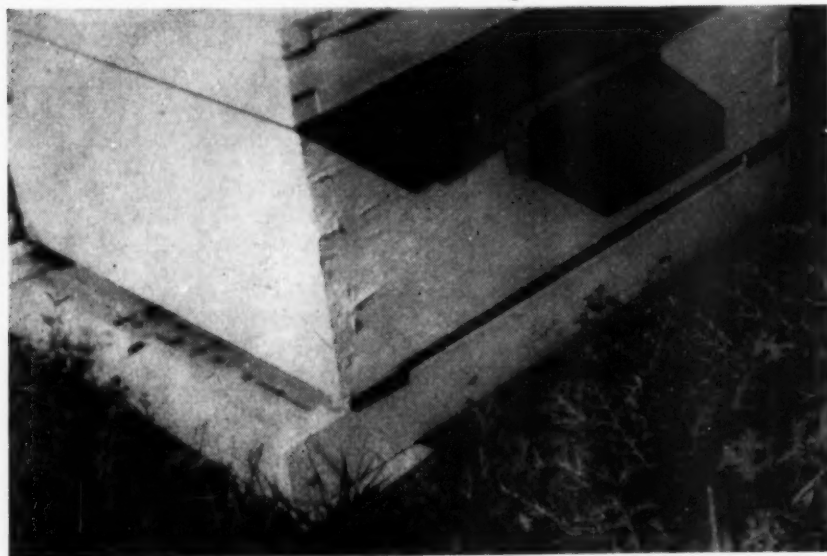
compared to 50 cents by horse or tractor. A total of 800 acres will be seeded in clover. March is the proper time to sow it, but usually, it is impossible to do it until April, except with the airplane.

Wax From Combs

The best way I know to get wax out of combs is to wait for a frosty winter day when the combs are brittle. When you step on a bag of them, they will crush into powder. Cook the comb right in the bag and there will be few cocoon pockets with wax left in them. Crush them, and your worry is over.

Andrew Prosick,
Pennsylvania.

HOW TO DO IT



Here in the Southwest we are troubled with hot weather from May through August, requiring extra ventilation. I cut small blocks, about two inches long, and the thickness of the space I want and place one block at each corner of the hive body and bottom board. The thickness of the blocks can be varied to adjust the ventilation. The lack of ventilation here when it is very warm can prove disastrous.

E. E. Pennington, Texas.

LET THE WIND HELP

Find out the direction of the wind when you are about to use the smoker and set the smoker on something to windward and about the height of your waist at about a distance of five or six feet. You can then work in perfect freedom as the bees will keep a respectful distance when you are thus protected by the slight smoke fumes.

Henry C. Fisher, California.

USING TWO SUPERS FOR HIVE

Most every beekeeper occasionally uses two shallow comb honey supers to form a hive. If a little care is used when nailing the flat tins on the edges of the supers they will permit the introduction of the deep brood frames and yet be as strong for supporting sections as they would have been if they had been put on in the regular way.

W. Leon Rogers, Massachusetts.

PRESSURE COOKER

If you cannot get a boiler for your steam uncapping knife, an easy way to keep going is to use a pressure cooker. Take the gauge off and screw an old-style valve stem from an inner tube into the threads where the gauge was removed. Screw your hose to this and you will have plenty of hot steam.

Urban J. Ashbacher, Iowa.

TO EMBED FOUR WIRES AT ONCE

An inexpensive way to embed four or more wires at one time is to reduce the current from an ordinary light circuit of 110 volts. Take any ordinary brood frame with heavy bottom bars, wired with regular frame wire and fasten one end of the wire to the top or bottom bar at one end of

the frame and then wrap the wire around the whole frame making 18 wraps about an inch apart so the wires will not touch each other. Then anchor the wire to the other end of the frame. This makes the right current for four wires.

If you wish a stronger current reduce the number of wraps until you have the right amount. If you wish a weaker current make a few more wraps. One end of the wire goes to the light circuit, the other end goes direct to the embedder and you have one wire from your light to your embedder. This makes an inexpensive reducing coil.

A. D. Wood, Idaho.

HONEY FOR ANGLEWORMS

A fisherman told me that if honey is smeared on gunny sacking angleworms in the sack will keep in good condition for several weeks. I advertised the idea and have had many calls from local sportsmen for honey to feed angleworms. Give the customers the best honey you have as he himself learns to like honey too.

Harry T. Starnes, Indiana.

SWARM CATCHER

Even though a swarm has been pouring out of the hive for a few minutes it may still not be too late to put on a queen trap as the queen often comes out last. I have succeeded many times in catching the queen with the trap in spite of the fact that I had to go to my shop to get the trap and the major part of the swarm was in the air when I returned.

W. Leon Rogers, Massachusetts.

SMOKER FUEL

I have used sacking, pine needles, grass and other kinds of fuels. In the past six or seven years I have used nothing but coarse planer shavings. I have found these shavings most satisfactory. They may be obtained without cost at any lumber mill. The shavings can be started to burn with lighted paper and after the shavings are burning strongly they will continue without any prompting.

F. W. Wichman,
Tennessee.

E. E. Pennington, Poth, Texas, gets the five dollars this time. Get busy with your camera. If your illustrated How-To-Do-It is accepted you get five dollars when it is published. Each item without illustration gets a three month subscription extension.

THE USE OF HONEYBEES AS "CARRIER PIGEONS" IN WARTIME

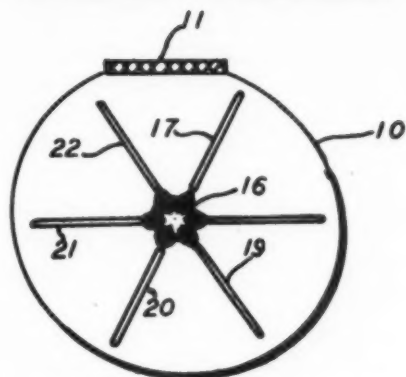


which is well defined and this is probably the first attempt to utilize bees in the way pigeons have been used.

According to this plan bees are delivered to the front line positions, each bee used shall be marked with a proper color and as the bees emerge from their domicile, a circular brush with a proper dye marks the bees as they emerge so they may be identified on return.

It is well known (see page 3 of the Public Service News) that bees will proceed from any point of release directly to the hive from which they came, so that if the hive is located at headquarters, bees may be released by soldiers at the front line and thereby carry messages to headquarters. The message is transmitted in code, based on colors suitably marked, applied in patterns by the brushes at the exit door.

The two illustrations show the release mechanism and the brush wheel by which marking is obtained on taking flight.



This idea was conceived by John Russell, Jr., one day in the bath tub in the Hotel Franklin in Spartanburg, South Carolina, and notes were taken by his father. Plans were then drawn up, bees properly tinted, together with models of the release gate, and were forwarded to the Chief Signal Officer of the Army. The Signal Corp in the Army thought enough of the plan to patent it in Russell's name.

The honeybee has a homing instinct

BEEKEEPERS THREATEN WALKOUT

G. F. Percy

After years of free service to the orchards from which the returns have been mostly losses from spray poisoning, and sometimes callous disregard of their property rights, the beekeepers of the Oliver district, at the southern end of British Columbia's fruit belt, decided to do something about it. After due deliberations a scale of fees for pollenization service was set and a contribution demanded from every acre of orchard in the whole territory which stretches some eleven miles in length and is fairly solidly planted to orchards.

The alternative as presented by the beemen was to be withdrawal of every colony of bees from the area.

The fact that acceptance of the scheme was almost unanimous is evidence of the growing appreciation of the value of the honeybee as pollinizer and also of a willingness to cooperate with the beekeeper.

Largely responsible for the inauguration of the plan is Mr. Stanley Oster of Oliver who is both beekeeper and orchardist. Also actively interested were the members of the South Okanagan Divn., of the B. C. Honey Producers Assn.

Distribution of the bees is arranged by a committee of two members consisting of one grower and one beekeeper who arrange for locations and check all colonies to ensure full strength for efficient pollenization service.

Payment to beekeepers at the rate of four dollars per colony is made through deductions by the packing-houses from the grower's account at the rate of fifty cents per registered acre of orchard. Orchardists themselves who own bees are paid from the same fund at the rate of 3.50 per colony while they make the same acreage payment as other orchardists.

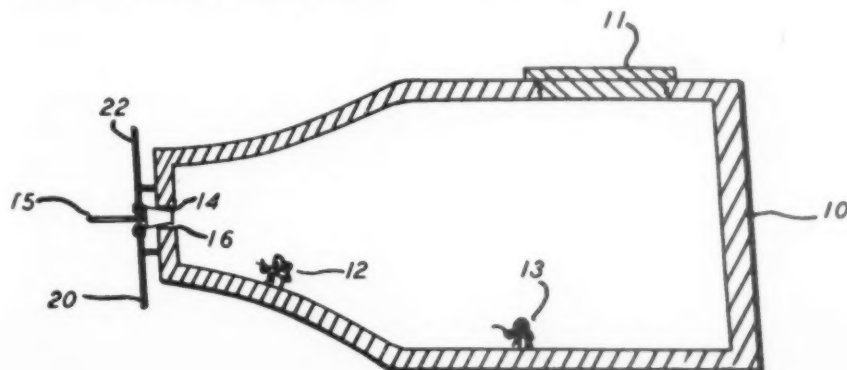
The number of colonies works out at approximately one colony to each eight acres of orchard. To our Eastern friends this may not seem a sufficiently heavy concentration of bees but in the salubrious climate of this Okanagan Valley there are few days during fruit bloom when the bees are unable to fly. In this Southern section there is a variety of tree fruits, giving a fairly long season of bloom, beginning with apricots and peaches on through cherries, pears and apples.

This pollenization scheme was first adopted in the spring of 1945 by an 85% vote of the growers but this year the vote was 100% in favor of its continuance.

Other districts are becoming interested and a smaller area near Kelowna is now in the process of organization.

One great advantage to the beekeepers in such a scheme is that a condition of such service is that all receive due notice before application of the lead arsenate calyx spray which is applied as the last blossoms are falling and this, we hope, will curb those who are always anxious to beat the starting gun, by spraying while trees are still in full bloom.

British Columbia.



TEMPERATURE AND HONEYFLOW

IN many localities the honeyflow from white Dutch clover will be on when this reaches our readers. It will supply helpful information if records are made of the temperature and humidity in localities where high daily gains are harvested. In 1936 the temperature averaged much higher than usual in the Midwest and although a fair crop was gathered there were few days when the hive on scales gained more than two or three pounds. In 1945 a cool and moist season at Atlantic, Iowa, there were many days with gains of from ten to twenty pounds and an unusually high average production was the result.

Large gains are seldom made when the temperature is above 90 degrees according to some observers. Hundreds of records by many observers over wide areas would help to establish the range of temperature at which heavy honeyflows are most dependable.

CARELESS MANIPULATION

MANY beekeepers carry on their work without understanding the reasons for the various manipulations. Too often when the combs are removed they are replaced without regard to previous position. Fifty years ago we heard many advocate brood spreading in the spring of the year as a means of stimulation. There are few who propose such action now.

A good queen is very regular in her brood pattern with larvae of the same age gradually followed with that which is older or younger. She moves in a regular cycle placing eggs in the cells from which young bees have recently emerged. To take a frame of brood from the middle of the cluster and replace with an empty comb breaks up the rhythm of the colony and results in indiscriminate mixing of different aged larvae.

Instead of spreading brood empty combs should be placed next to the outside of the cluster to permit the queen to expand the brood nest in normal manner. The careful beekeeper replaces brood combs in the same order after examination to avoid spoiling the brood pattern. There are times when violent changes are necessary to control swarming or to provide for expansion of the colony but these changes should be

made for a definite purpose and with understanding of the probable effect. Careless manipulation often results in substantial reduction of the honey crop.

MEETING OF HONEY PLANT COMMITTEE

SO much interest resulted from the conference of the honey plant committee with agronomists, horticulturists, soil conservationists and others last year, that the National Federation voted to repeat with the public invited to all sessions. This year's conference is to be at Atlantic, Iowa, and is to include a visit to the American Bee Journal honey plant test garden. The dates July 12 and 13 were selected because a greater variety of honey plants are likely to be in bloom at that time.

The pollination conference is a new kind of meeting. When the beekeepers meet with other groups dependent upon insects for pollination they get a new viewpoint and learn how to advance their own interests by serving the needs of others. It is surprising how many groups find a common interest in the honeybee.

The complete report of last year's conference has recently been published in connection with the report of the Iowa State Apiarist for 1945.

BEES AND CLOVER

NEVER have the seed growers manifested so much interest in bees as now. Leading farm magazines carry feature articles relating to the importance of bees in pollination and giving results of increased yields where bees are present.

The seed magazines report a record demand for seeds of legumes, especially red clover and alsike clover. Canadian publications report a similar demand to that in the states.

Average yields of red clover seed in the mid-west have continued to decline from year to year as the number of bees have been reduced until less than a bushel per acre is harvested in many neighborhoods.

Idaho reports the highest average yields of both red clover and alsike clover. Most of the red clover seed is produced in the irrigated counties of southern and eastern Idaho with an

average return of four and one-half bushels per acre. Alsike is grown in Long Valley and Big Camas prairies in western and north-central Idaho with little or no irrigation and similar yields are harvested.

The demand for bees from seed growers is such that the beekeepers must be prepared to place apiaries where needed or many new outfits will be established. Bees in the hands of those who do not understand their care are likely to be disappointing.

THE WAGNER PEA

IN the December, 1941 issue of this magazine appeared an extended account of the Wagner pea in our honey plant test garden. Since that time small amounts of seed have been widely distributed and many people have tried it. The plant is slow in becoming established but reports are now coming in which offer great encouragement.

We are told that it will succeed on poor soils where few legumes do well; that it yields heavily for either hay or pasture and that its protein value is high. The bees work it freely and in localities where farmers make general use of it, good bee pasture is likely to result.

MYSTERIOUS BEE DISORDERS

FOR many years there have been periodic occurrences of adult bee disorders for which no satisfactory explanation has been made. In some seasons the superseding of queens coming with package bees is so general as to cause serious problems to those depending upon this source for replacement or expansion.

In the book, "Plants and Beekeeping," F. N. Howes states that in Switzerland and elsewhere in Europe the pollen of the buttercup is responsible for a form of "May Sickness" which occurs in bad outbreaks in some seasons.

In our own country the spotted loco has been recognized as the cause of death of large numbers of bees in Nevada and in the southeast the yellow jessamine has been under suspicion for many years. This climbing vine which is visited by the bees for pollen was recognized as the cause of

serious bee losses by Dr. J. P. H. Brown of Georgia more than sixty years ago.

But little attention has been given to the effect upon bees of pollen from plants known to be poisonous but this appears to be a promising field for investigation. The honey producing industry is so dependent upon the shippers of live bees that no effort should be spared to discover the cause of these losses.

NATIONAL ORGANIZATION

THE first attempt at organizing the beekeepers of this country on a national scale was at Cleveland, Ohio, March 15, 1860. Since that time dozens of reorganizations have taken place in an attempt to meet the needs of the industry. Even the name has been changed again and again and most of the men prominent in the field of beekeeping have held office at one time or another.

The one period when the organization attained a substantial membership and a comfortable degree of prosperity was when it undertook to fight for the beekeeper's legal rights. It became prosperous when the beekeeper realized that the society was of real service to him. When it no longer offered real help to its members it fell into disrepute and for many years found little support.

The present National Federation of Beekeepers Societies appears to be the natural successor of the first organization which has had such a tempestuous career. After many years it is again attempting the role of a service organization and once again it finds substantial support.

The business of honey production is growing and finds itself faced with many important problems that can only be met successfully through organized effort. If the beekeeper is to remain prosperous he must have a strong organization. If the organization is to receive support it must provide service. The Federation is making a creditable showing in this direction. Already it has outlined a constructive program of bee pasture improvement through cooperation with other groups interested in pollination. An effort will be made to find relief from the loss of bees through poison, a better product is the goal of the better honey committee and a solution of other problems is sought. The Federation officers promise of indispensable service to the beekeeper. It deserves support.

For the Ladies

What you want to know



June is the month of early roses, the end of the school year, and the beginning of summer, but most important of all, it is the month for brides. In the natural course of events, this also makes it become the month of bridal showers. For those among you who will have occasion to plan such an event, we would like to offer some ideas and suggestions for making your party something which the bride will remember with pleasure for years to come.

It is an occasion worthy of your most cherished linens, crystal, and silverware. If you are so fortunate as to have a yellow June rose bush in your garden, it is a simple matter to create a striking lovely setting. Make a large, looped bow of stiff white tulle or net. Fasten, in the center, a cluster of the roses with stems long enough to hold them upright in a narrow-mouthed jar or vase of clear glass. Arrange the loops of the bow to conceal the container. Flank this with tall white tapers. You might make a miniature nosegay of the roses for each guest by nestling two or three of them in a lace paper doily and wrapping the stems with metal foil or cloth tape.

Let the food rival the centerpiece in beauty by serving Honey Angel Food Cake with Apricot Boiled Icing. This is not only a thing of beauty, but a taste thrill as well.

Honey Angel Food

1 teaspoon cream of tartar
 $\frac{1}{2}$ teaspoon salt
 1 cup egg whites (8 to 10 whites)
 $\frac{3}{4}$ cup sugar
 1 cup cake flour
 $\frac{1}{2}$ cup honey
 $\frac{1}{2}$ teaspoon grated lemon rind

Add the cream of tartar and salt to the egg whites in a bowl. Beat the whites with a wire whip until they are stiff. They should move only slightly when the bowl is tipped. Fold one-half the sugar slowly into the egg whites 2 tablespoons at a time. Sift the remaining sugar with the flour and add later. The $\frac{1}{2}$ cup honey must be warmed so that it will be thin and will pour in a fine stream over the egg whites as the egg whites are folded in. After the honey is added, fold in the flour and sugar mixture, sifting $\frac{1}{4}$ cup over the whites at a time. Add grated lemon rind. Pour the mixture into an angel food pan and bake at a temperature of 300°F. for 50 minutes. Invert the pan, cool and remove to a cake rack.

Apricot Boiled Icing

1 $\frac{1}{2}$ cups honey
 $\frac{1}{2}$ teaspoon salt
 2 egg whites
 $\frac{1}{2}$ cup sieved, cooked apricot pulp

Cook honey and salt to 238°F. or until it will spin a thread, or make a soft ball when dropped into cold water. Beat egg whites. Pour the hot honey in a thin stream over the beaten egg whites continuing to beat until all honey is added and frosting will stand in peaks. Fold in apricot pulp. Spread on cake.

Louis V. Olson, American Smelting and Refining Company, El Paso, Texas, asks whether aluminum can be safely used for the storage of honey. The following answer has been given by Dr. V. G. Milum, University of Illinois:

Since ordinarily aluminum is not used for honey storage I asked Dr. Englis of our Chemistry Department. He suggests that an aluminum oxide easily forms on the surface of the aluminum and that while oxide films normally form a protective coating the hydroxy organic acids of honey would easily remove this and would attack the exposed surface. It is suggested that if the containers are large only a relatively small surface would be exposed to the honey as compared to its total volume. Whether the amount of aluminum incorporated into the honey stored for short periods would be serious we cannot say but we certainly would not recommend to beekeepers that they store honey in aluminum tanks.

Earl Robinson of Oelwein, Iowa, inquires about arrangements for bees on share and R. A. Grout answers:

If you have a man who wants to own a definite number of colonies and have yards which are entirely his own, I suppose there is not much there can be done about it. We have such set-

When it is time to cut an angel food cake, here is a tip which will help you. If the cake is covered with a fluffy icing as is the one given here, use a very sharp, thin-bladed knife. Cut with a sawing motion and avoid pushing the knife downward as this ruins the delicate structure of the cake. If the cake is used plain or with a thin icing, tear it into servings with two forks by placing them back to back at the point where the division is to be made and pulling them apart.

Another pretty note for this, or any other special party, is to serve the ice cream, sherbet, or parfait in frosted sherbet glasses. All you do is dip the rims of the sherbet glasses in white of an egg which has been spread in a thin layer in a saucer. Then dip the glass into a saucer containing a thin layer of sugar if you have it, or salt if you don't. Allow to set in a cool place until dry. Colored sugar or salt can be used for special holidays.

up and altogether it is not entirely desirable. If at all possible try to keep from a definite segregation of colonies or you may find yourself being neglected in favor of the other fellow.

Probably a better arrangement is to let the operator have an interest in the outfit without any definite specified group of colonies. Give him an interest in the production of the whole outfit with a share in the total crops according to his interests. He may be permitted to increase his interests in the outfit from year to year if desirable.

Another arrangement is not to allow an operator to have any interest in the outfit but to pay sufficient wage to make the job attractive enough to keep him.

Elmer H. Wagner of St. Louis plans to use bees in a Boy Scout merit badge program, so he wants some ideas.

An observation hive would help and I think your boys could build it. All you need is glass panels, rabbets for the frames, some sort of an entrance at one end and a cover.

One of the best things to liven up the show is to let the boys handle bees in a wire cage. Use a gentle colony. The bees may be removed from the cage following the demonstration or you may build a flight entrance in the cage so the colony may remain during a time.

Wilbur Gifford, of Oregon, wants to know if southern curled mustards will produce nectar or pollen. Frank C. Pellett answers:

Nearly all of the mustards are good honey plants. In some localities considerable surplus is secured from them. There is a variation in quality, some mustard honey being very good, others strong in flavor.

H. R. Harvey, Scappoose, Oregon, on a fifteen acre walnut and fruit ranch, wants to know if a single colony of bees will make any appreciable effect on 300 fruit trees in pollination.

It is ordinarily recommended that at least two full colonies of bees per acre be used for proper fertilization of fruit bloom. Often there is not sufficient good weather during bloom so bees can get all over the orchard and it is best to spread them out and have ample bees. A colony for 300 trees will do much good in good weather. The more bees you have, however, the more complete the pollination will be.

Institute News Notes

American Honey Institute, Commercial State Bank Bldg., Madison 3, Wis.

With efficient production and distribution of good quality honey, a great future lies ahead for the industry.

When the president of one of our country's best known business concerns was asked to what he attributed his success, he said "Competition."

Sometimes we are apt to think of other honey producers or honey packers as our competitors. They are not competitors—they should be considered partners working shoulder to shoulder to bring our industry to unprecedented heights. Those who are putting out products to be used for same purpose as our good product are the competitors.

Indications are that demands for all foodstuffs will continue strong this year.

This country has a population of eight million more than it had five years ago.

War torn countries need our help and we trust that we shall be able to give it to them.

Copies of "Old Favorite Honey Recipes" traveled by Air Express to Bermuda.

This week copies of "Old Favorite Honey Recipes" were on their way to Budapest, Brussels, Sweden, and England.

How do we package honey? Do we give the consumer the size container she desires? In our self-service stores, do we find the honey package easy to pick up? Is it free from dust or stickiness? Does it have the Just Arrived look?

Labels

Does the label have a cluttered up appearance? What is it that attracts the consumer's attention? Is it the bee on the label? Is it the flowers on the label? Or, is it a good looking honey dessert or bread and honey?

What is it that sells a biscuit mix? Is it a picture of a wheat field or a plate of hot biscuits and honey?

What is it that sells coffee, a picture of the coffee bean or a cup of steaming hot coffee?

Just as salads must be simple to be interesting and have appetite appeal, so it is with the labels.

Let your label be your salesman.

Honey sales are made right in the store. The honey package must attract the consumer. It should glide right into her shopping basket.

The Institute is constantly studying trends in food tastes and habits of consumers.

It is developing recipes in which honey is an ingredient.

It is preparing and distributing leaflets, booklets, and educational material for consumers, teachers, dietitians and students.

A copy of the broadcast on "Spring Salads" by Harriett M. Grace on May 15 may be had for the asking.

Honey Fragments

GI FAVORITE—

One of the GI favorites was a candy blended of ground dried fruit and honey.

BAKING SPECIALIST—

A specialist in the field of commercial baking says—"All the recipes I wrote that were published in _____ Magazine were used to good advantage by me in retail baking, and many large wholesale bakeries have profited by the use of honey in their baked goods."

MAYONNAISE—

A few salad dressing companies are most desirous of securing honey to use in their mayonnaise and sandwich spreads.

BACTERIA—

Bacteria which causes diseases in human beings cannot live in honey, this makes it safe and wholesome.

PRIZE WINNING RECIPE—

In a recent edition of the Chicago Daily Tribune the \$5 prize winning recipe was one for "Date and Honey Biscuit Slices."



WHAT a swarm! And it is being hived in approved fashion. Might put it down in an empty hive body and set the hive cover on top as the bees stay put better and take their own time to get used to their new set-up. But, gosh darn it, why have these swarms? Wish some wizard would tell us just what buttons to press to avoid them. When we think we know, is the right time for nature to bust our egotism into a cocked hat with a flock of swarms.



HALF the world has been sown with the dragon teeth of war, and famine and disease, plow the farms that were battlefields. This starving mother and child typify the need for food. The Emergency Food Collection is a chance to contribute to the relief of millions. Give money or food: milk, meat, fish, baby foods, stews, soup, honey, fruits, juices and vegetables. Foods may be given to your local committee. Checks and money orders to National Headquarters, Emergency Food Collection, 100 Maiden Lane, New York 7, N. Y.

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CANADIAN BEE JOURNAL

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For More Honey and Better Wintering

buy pure mated Caucasian Queens. We have them at 1.00 each. Any number.

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MAGIC ELECTRIC WELDER

110 volt AC-DC; welds, brases, solders, cuts all metals; easy to use; full directions. Complete with power unit, flame and metallic arc attachments, carbons, fluxes, rods, mask. Used by the navy. Guaranteed for one year. Splendid for farm use. Only \$19.95.

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NORTHERN BRED

Leather Colored Italian Queens

90 CENTS EACH

DIEMER BEE CO.

Rt. 2, Box 7, LIBERTY, MISSOURI

We Can Book a Few More Orders
FOR 1946

AT PREVAILING PRICES

THE VICTOR APIARIES

UVALDE, TEXAS

ITALIAN BEES AND QUEENS

Good bees and good queens make a good package. We have had 25 years' experience with bees and can give you good service.

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.25	\$4.00	\$5.00	\$6.00
25-99	1.15	3.75	4.75	5.75

For queenless package deduct price of queen

BENNETT BEE FARMS

1504 N. Main St. Hattiesburg, Mississippi

The Handy Hive Hoist

Will lift 5 or 6 full depth supers at once and hold them out of your way while you work the brood nest, and replace them easily and safely. Write for pamphlet.



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Patent Applied For

Leather Colored Italians

REAL HONEY GETTERS

Gold Flat Apiaries

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The GOAT WORLD

OFFICIAL ORGAN OF THE
American Milk Goat Record Association
Oldest and largest Milk Goat magazine published. Broadcast circulation. Articles by best authorities. Subscription rate: one year \$2.00; three years \$4.00; five years \$6.00.

Sample copy 20 cents
Address:

The Goat World, Roanoke, Va.
1119 WILLIAMSON ROAD

Palmetto Quality Queens

These are our summer prices on our Three-Band Italian Queens. 1 to 10 queens 95c ea. More than 10, any number 85c each. Write for special prices on days when orders are slack. No disease, safe delivery.

C. G. Ellison & Sons
BELTON, SOUTH CAROLINA

Comb Honey Needed

Please advise the quantity you have. Size section and how packed. I also need chunk honey in 1 pound glass.

Frank H. Hauck

P. O. Box 84, KEW GARDENS, N. Y.
Bank reference furnished on request

EVERYBODY'S TALKING ABOUT

The Beekeepers' Magazine

IT'S SPICY—IT'S INDEPENDENT

Send for your free copy and special introductory subscription offer today.

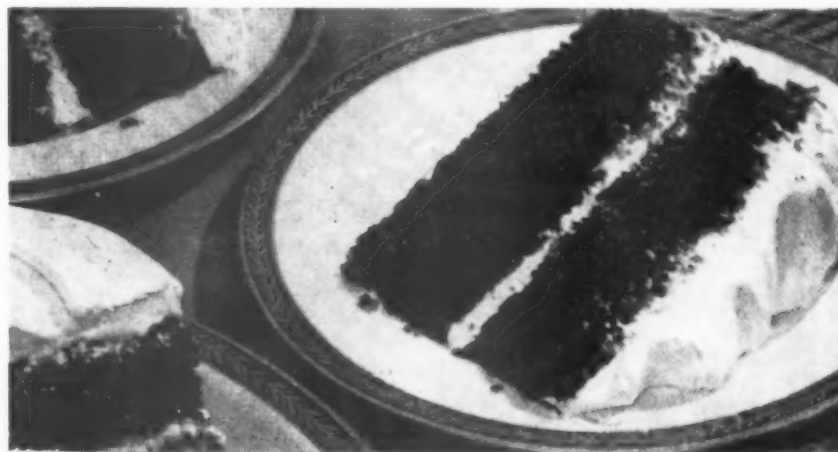
ELMER CARROLL, Publisher
RT. 5, BOX 181 LANSING, MICH.

A-B-J Ads Bring Results

JUNE, 1946



KAREN Francis, daughter of Mildred Francis of Franbee Farm, West Allis, Wisconsin, adds four years to her stature and she is still one of our favorite honey girls. Karen graced the cover in April 1942. Four years have changed her. She still eats no sugar, and can consume honey in any form with great relish. Her sister is following in her footsteps. Both are extremely healthy.



SWANS DOWN'S NEW "MIX-EASY" HONEY FUDGE CAKE

Preparations: Have shortening at room temperature. Grease two 9-inch layer pans or one 10x10x2 inch pan, cover bottoms with waxed paper, and grease again. Start oven for moderate heat (350°F.). Sift flour once before measuring. Use Swans Down Cake Flour. (More women choose Swans Down than all other packaged cake flours put together.)

(All measurements are level.)

Measure into sifter:
2 cups sifted Swans Down Cake Flour
(And be sure it's Swans Down!)
1½ teaspoons soda
1 teaspoon salt

Mixed in small bowl:
1¼ cups honey
2/3 cup water
1 teaspoon vanilla

Have ready:
2 eggs, unbeaten
2¼ squares Baker's Unsweetened Chocolate, melted.

Measure into bowl:
½ cup shortening

Now—Swan Down's "Mix-Easy" Part!

(Mix by hand or with electric mixer at low speed.) Mix shortening just to soften. Sift in dry ingredients. Add ½ cup of the liquid and the eggs. Mix until all flour is dampened; then beat 1 minute. Add remaining liquid and melted chocolate, blend, and beat 2 minutes longer. Batter will be thin. (Count only actual beating time. Or count beating strokes. Allow about 150 full strokes per minute. Scrape bowl and spoon or beater often.)

Baking: Turn batter into pans. Bake in moderate oven (350°F.) about 30 minutes for layers or about 40 minutes for square cake. Frost with Easy Fluffy Frosting.

Easy Fluffy Frosting. Beat 1 egg white with dash of salt until stiff enough to hold up in peaks, but not dry. Pour ½ cup corn syrup or honey in fine stream over egg white, beating constantly about 4 minutes, or until frosting holds its shape. Add ½ teaspoon vanilla.

Italian Package Bees and Queens

1-24 25-49 50-up
2-lbs. with queens \$3.50 \$3.40 \$3.20
3-lbs. with queens 4.50 4.40 4.20
Extra queens, ea. 1.00 .90 .80
Guaranteed safe arrival, free from disease. No C. O. D.

Oscar Arnouville
Hamburg, La.
Box 35



Carpenter's Electric Embedder
PATENTED 2,383,708

"Better Bee-Havior"

TRADE MARK

Electric embedder's for horizontal and cross wiring, standard size models available for any voltage, including farm, and automobile batteries. Electric and automobile battery models for half depth, and shallow frames all sizes, models to accommodate nails, or hooks instead of lacing wires through frame. Embeds all wires at once evenly. Handles crimp wired foundation. Please add California State tax, and correct postage to orders.

Terms \$7.50 cash, F.O.B. Riverside, California. Dealers satisfactory discounts. Shipping weight 6 pounds.

Manufactured by

CLAIRE E. CARPENTER
T. N. ROGERS
4266 Homewood Court
RIVERSIDE, CALIFORNIA

Bright Italian Queens

From our apiaries will give you service unexcelled. Our more than 40 years in rearing queens has taught us the how in rearing the best. You must be satisfied. The price 1 to 25, \$1.00 each. From 25 up 90c each.

COTTON BELT APIARIES

BOX 163 KLONDIKE, TEXAS

Italian Bees and Queens

NOW BOOKING ORDERS—Shipping started April 10th

2-lb. package with young queen \$3.50
3-lb. package with young queen 4.50
Extra queens \$1 each postpaid, any amount.
Better book your orders now.

Bond & Son Apiaries

UNION, MISSISSIPPI P. O. BOX 111

Meetings and Events

Middlesex (Mass.) Stoneham

For our June meeting the Middlesex County Beekeepers Association will meet at the home of Mr. and Mrs. Everett A. Lovering, 73 Elm Street, Stoneham. This is on route 128, a short way from Stoneham center. Hives will be opened in the afternoon. Bring your questions and problems with you. Don't forget your picnic lunch, also cups and saucers for coffee and ice cream. We will have a speaker after lunch. Bring your camp chairs.

Harold R. Stevens, Pres.

New Rochelle (N. Y.) Pelham Manor, June 16

The New Rochelle Beekeepers Association will hold its next regular monthly meeting at 2:30 P. M. on Sunday, June 16, 1946, at the home of Mr. Lawrence A. Anderson, 652 Timpson Street, Pelham Manor, N. Y.

This will be an outdoor meeting, weather permitting, and there will be a demonstration of hive inspection. Bee problems will be discussed, after which refreshments will be served.

B. F. Miller, Publicity.

Minn. and North Dak.—Detroit Lakes—July 25-26

A joint meeting of the Minnesota and North Dakota Beekeepers Associations will be held at Detroit Lakes, Minnesota, July 25 and 26. The program, being planned by a committee of the two associations, will be of special interest to beekeepers and a large attendance is expected. A field trip to one of the large commercial apiaries near by will feature one of the afternoons.

Dr. E. R. Root has already been secured as a speaker and others will be announced as arrangements are completed.

Arvid P. Benson.

Georgia Bee Laws and Regulations

Migratory beekeeping is practised in most States to some extent. In Georgia it has increased to such volume that it has become a problem from a disease control standpoint.

Migratory beekeeping has its advantages and its disadvantages. It has helped bee culture in Georgia to the extent that today Georgia is recognized as one of the leading combined honey producing, package shipping and orchard rental States. Last year Georgia spent one third of its annual inspection appropriation inspecting 18,000 colonies of migratory bees from fourteen States and Canada. It is doubtful that any other State spends as much of its appropriation inspecting as many colonies from so many different States.

During the past two years, and especially since war restrictions have been removed from gas, tires and trucks, thousands of colonies have been moved into Georgia with, and

The Migratory Problem

(Continued from page 236)

lishment of prohibitive laws in the clover belt. No sensible producer is going to place bees in an area where he, himself, year in and year out has a failure, so it seems unjust to have these barriers erected.

In order that justice may be done to all; the states should either, all be closed to the movement of bees, or they should all be open. If this could not be brought about, the states involved should work out a reciprocal arrangement that is mutually agreeable, and those that did not want to participate would be locked out of the others. Of course, we all know that when bees are moved into any territory other than where they originated, some one is going to get upset over it and bitterness is usually the result. This feeling keeps producers from working together, and affects every one in the industry, because it destroys unity of action which is the one and only way beekeeping is going to prosper. So the best way to have good will with other producers is to stay out of their so-called territory, or buy a complete outfit that is already part of the territory. However, as a closing thought, I would not like to see such good friendship among beekeepers, that it would make it impossible for two to get together, and talk about the third because that would take half the joy out of life.

without, certificates or Georgia permits. Our inspection records show that disease has been found in over seventy-five percent of northern migratory operators. Disease has been found in counties that never had disease before migratory beekeepers moved in.

A number of apiaries, of native beekeepers, were infected and they suffered a financial loss. Most Georgia commercial beekeepers and State inspection officials do not favor a State-wide comb embargo. However, they feel that a comb embargo, or better enforcement of our bee laws and regulations, is necessary if Georgia bee culture, worth two million (2,000,000.00) dollars annually, is to be protected.

The following laws and regulations are in effect and will be enforced. The Georgia law states that colonies of bees, and used equipment, to be moved in, must be inspected and certified by your State official, and colonies of bees and equipment must be moved in within sixty (60) days from inspection date. The regulations also state that you must have a Georgia permit to move in. To obtain the permit you send your inspection certificate to the State Department of Entomology, State Capitol, Atlanta, Georgia; give the number of colonies you plan to move in; the approximate date of entry and the Georgia county where you plan to locate your bees. The above laws and regulations will not inconvenience any beekeeper who wants to do what is right. This regulation gives Georgia inspectors a chance to inspect bees brought in, as we will know when and where to find them.

The Georgia law states that any beekeeper, resident or non-resident, who operates a queen or package business, shall pay a license fee of \$25.00.

Anyone who is convicted of violating the Georgia bee disease law is subject to a \$500.00 fine, and the Department Director has the authority to have the colonies of bees, and/or used equipment that is brought in illegally, destroyed or moved out of the State.

In the past some northern beekeepers have had their bees inspected during the summer months and then waited until mid-winter, when they were broodless and could not be inspected, to bring them into Georgia. This is a violation of the Georgia law and will not be permitted. Your bees must be in Georgia within sixty (60) days after your inspection date.

Package Bees, Old Line Bred Since 1924

AFTER JUNE 10—1 QUEEN 95c; 50-UP 90c; 100, 85c. 2-LB. BEES \$3.60; 3-LB. BEES \$4.50. EXTRA POUND BEES \$1.00.

Place your order early to get your shipping date when wanted. War II veterans first served. Spring queens raised from stock of over 200 pound production after pulling bees for packages all spring till in July 1945. Also resistance queens direct from government stock at same price.

Homer W. Richard : Rt. 3, Box 252-A, El Dorado, Ark.

QUEENS

QUEENS

QUEENS

We are making a special effort to furnish you more and better three-banded Italian queens, carefully produced and selected for high production in our customer's colonies.

PRICES

June 1st, 1946, through Sept. 30th, 1946

1-11, \$1.00 each; 12-99, 90c each;
100 and over, 80c each

"Live Delivery and Your Satisfaction Are Guaranteed"

JOHN C. HOGG, Apiarist
TIFTON, GEORGIA

SMITH'S THREE-BANDED BEES AND QUEENS

No, we won't write a long ad. A few simple facts, then you be the judge. Twenty-five years' satisfactory service, a gentle, thrifty strain of bees. All queens personally produced myself. Whatever we do in the bee business we try to do right, therefore can assure you full dollar value when you buy from us.

	Queens	2-lb. Pkgs. with Queens	3-lb. Pkgs. with Queens
1-24	\$1.10	\$3.85	\$4.95
25-49	1.00	3.60	4.60
50 or more	.90	3.40	4.40

If queenless packages are wanted, deduct price of queen. Order direct from this ad—you will be satisfied.

N. B. SMITH & CO.

Calhoun, Alabama

QUEENS . . . BESSONET'S . . . QUEENS

We are prepared to supply you with queens during the summer and fall months at the following prices: 1-24, \$1.10; 25-99 \$1.00; 100 or more 90c each, postpaid.

Bessonnet Bee Company : Donaldsonville, La.



Queens-3-Banded Italian

1 to 24, \$1.00 Each 25 up, 90c Each

Eells Honey & Bee Co., Houma, La.

ITALIAN BEES AND QUEENS

Our queen yard will be operating full capacity for the remainder of the summer, and your orders can be shipped 24 hours after received.

Queens, less than 100 \$1.00
Hundred lots or more .90

Our queens are bred of resistant stock. We are out of package bees remainder of the season.

LUCEDALE APIARIES : LUCEDALE, MISS.

MACK'S QUEENS

(THEY SPEAK FOR THEMSELVES)

Our system of producing these Big Hardy Northern Bred Italians assures you of queens of the Highest Quality. (See our advertisement in May issue). These queens produce scads of bees so Gentle and Docile your back lot neighbors will scarcely know you keep bees. All queens of our own rearing and fully guaranteed.

PRICE

\$1.00 EACH AND CLIPPED IF YOU SAY

HERMAN McCONNELL & SONS
ROBINSON, Rt. 2, ILLINOIS

Better Bred Queens 3-Banded Italians

We have a large queen yard going strong, and as our package season is over, we will have a large surplus of queens of the best quality. We are willing to sell them at a low price rather than cut our queen yard down. Send your rush orders. We can fill them promptly.

Queens 70c each, any quantity

CALVERT APIARIES : : Calvert, Alabama

Every Queen a Champion

Big, sturdy, ready for the hive. Everyone selected, no inferior queens sold. Make it a point to get some of these queens and give them a hive test. We cannot raise this high quality in unlimited numbers, so get your order in early.

QUEENS 80c EACH

Let us quote you on requeening all of your hives, state number of hives you have and approximate date you wish to requeen.

We have a number of champion, tested, hive proven, breeding queens to offer. Granddaughters of resistant stock, crossed with three banded Italians to produce a just right combination of gentleness, resistance, and general excellent qualities. These queens at \$10.00 each with 1 pound of bees.

BAYOU BEE CO. : Bourg, La.
 Raymond Viguerie, Owner

Georgia welcomes migratory beekeepers and requests their cooperation with reference to bee laws and regulations. For information on package shipping regulations and Georgia bee laws write to Mr. C. H. Alden, Director of Entomology, 432 State Capitol, Atlanta, Georgia.

Washington Tour

A thousand-mile tour was recently organized by the Washington Association, holding meetings in Spokane, Clarkston, Walla Walla, Clark County and Puyallup. This is a plan which might be followed by other associations to their advantage.

The Washington Association incorporated with Washington State Horticultural Association has just issued a book, "Helpful Suggestions in Commercial Pollination," outlining what the beekeeper should do to help the orchardist and what the orchardist should do to help the beekeeper. This is also worth doing elsewhere.

Virginia

At the meeting in Lynchburg the State Association took definite steps for better beekeeping in the future, with the idea of making the state one of the most successful and progressive in the industry. The G. B. Lewis Company was host at a lunch served the sixty members attending the meeting. C. H. Watts, President.

Greenville, June 10-11

Texas Association will meet in Greenville, Monday and Tuesday, June 10 and 11, in the first annual meeting since June 1941. It is significant that this meeting is to be in the city where the original association was formed sixty-nine years ago, in 1877. Also just a hundred years after Greenville and Hunt County were organized.

Among those on the program will be Glenn O. Jones, National Federation; Dr. F. L. Thomas, Chief Entomologist, A & M. College of Texas; Hon. A. Gay, Inspector of Apiaries for Arkansas; M. J. Deyell of Medina, Ohio and other authorities.

Utah Honey Producers

Ray N. Miller was re-elected president of the Utah Honey Producers' Co-operative in Salt Lake City. Other officers include: Arthur G. Pledger, Ogden, vice-president; Royal Atwood, Bountiful, secretary-treasurer; and Edwin L. Malmgren, Centerfield; Otto Stewart, Spanish Fork; Marion Cox, Providence; J. Evan Wright, Delta, and Ivan Morrill, Tridell, directors. Glen Perrins, Utah.

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Production-Bred Italian Queens

From selected stock, tested and tried for honey production and hardiness in our Northern units.

Gentle, leather-colored bees, expertly bred under the finest natural conditions for people who operate bees as a business. If you want bees that are beautiful to look at but too lazy to produce, don't buy from us.

Certificate of inspection with each shipment.
Pure mating and live delivery guaranteed.

1-24	\$1.00
25-9990
99-up85

Babcock Honey Company

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Columbia, S. C.

For the Best Results

in producing a maximum crop this season, replace winter loss, fill all available equipment and boost wintered over colonies with

PACKAGE BEES

Our supplies are on hand and labor is available to give you the service you desire and expect.

Packages are of top quality bees and queens that produce extra honey that gives you a higher percentage of profit.

2-lb. with queen	\$3.50
3-lb. with queen	4.50

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Satisfaction guaranteed
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Rossman & Long

Box 133 : Moultrie, Ga.

Queens and Package Bees

HEADED BY OUR FAMOUS QUEEN STRAIN

Three-Band Italians

Queens	\$.75
2-lb. bees with queen	3.50
3-lb. bees with queen	4.50
4-lb. bees with queen	5.50

Apiaries accredited and certified by the Alabama Department of Agriculture.

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WE STILL HAVE SOME OPEN DATES
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Satisfaction guaranteed
•

O. K. Anderson & Son

Coffee Springs, Ala.

INVENTORS

We have an inventors' page on which we are picturing new inventions. If you have some worthwhile invention, send us a picture or a drawing along with an explanation of its operation, and if we decide it is worthy of space we will picture and describe it on our inventors' page, giving your name and address at no charge to you.

PICTURES

We need sharp, clear pictures of everything concerning bees. Not just ordinary pictures but pictures that will attract attention. Pictures with a story attached when possible that will be of interest to other beekeepers. We will pay you in cash for all pictures and articles we publish.

For pictures and articles that we publish in the ITEM we will pay the following rates—ARTICLES, \$5.00 per page; PICTURES AND DRAWINGS, \$1.00 each.

Subscription rates \$1.00 per year; 2 years \$1.50; 3 years \$2.00. Sample copy free.

THE BEEKEEPERS ITEM

WALTER T. KELLEY, Editor

Paducah, Kentucky

Highest Prime Quality Three-Banded Improved Strain Package Bees & Queens

Backed by over 25 years careful selecting, breeding and shipping to all points in U. S. A. and Canada with 100% perfect satisfaction guaranteed to every one in every respect.

OUR YOUNG VIGOROUS BOOSTER PACKAGES WILL GIVE YOU RESULTS, try them in your weak, or colonies that are not up to standard and see what extra gains you get, deduct price of queen.

EACH AND EVERY BEEKEEPER'S SUCCESS DEPENDS LARGELY on the queens you have your colonies headed with if you have hundreds of colonies or a few, see that each and every one is headed with a young vigorous queen from the very best tested honey producing stock, this we feel free to say we have to offer you only when you requeen with our queens which speaks for themselves to every beekeeper who uses them in U. S. A. and CANADA, they are guaranteed to do the same for you.

PRICES AFTER JUNE 1ST				
	1-24	Queens	2-Lb.	3-Lb.
	25-99	1.00	3.60	4.65
	100 up	.90	3.35	4.35

H. A. Farmer Apiaries, Cottonwood, Ala.

TELEGRAPH AND EXPRESS OFFICE DOTHAN, ALA.

● ● THE NO. 50 CEDARBURG UTILITY FURNACE ● ● CONVERTS KEROSENE INTO GAS

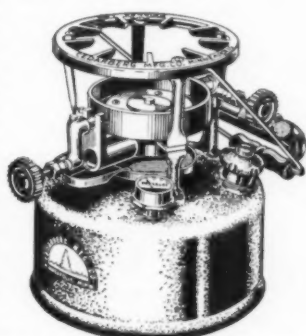
THAT BURNS SILENTLY WITH A CLEAN BLUE FLAME LIKE NATURAL GAS

SAFETY

Because it burns kerosene, safety is assured. Don't run risks or increase your insurance rates by using dangerous heating methods. And it's economical too, just think, this furnace will operate up to 12 hours on one gallon of kerosene at a cost of about 10 cents.

HEAT

This is not a wick type stove, but a real furnace operating under pressure on the fuel tank. It gives an abundance of heat. As an example of its capacity, two gallons of cold water can be brought to a boil in ten minutes and yet can be turned down to only simmering heat.



Specifications

Height, over all 11 in.
Floor space 10 3/4 in.
Fuel capacity 1 gal.
Net Weight 12 1/2 lbs.

Shipping weight 19 lbs.

\$17.95

F. O. B. Minneapolis

JUST THE THING FOR THE BEEKEEPER

You'll find a dozen uses for this portable heating unit, for heating the honey bottling tank, for liquefying honey, for heating the wax melter, for heating the sterilizing tank, etc. Heat in large volume, has many useful purposes on the farm. The housewife may use it for heating water for the laundry and as an auxiliary stove for cooking and canning and anywhere when constant and controlled heat is needed.

**In Stock for Immediate Delivery
Order Yours Now**

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HONEY SALES COMPANY,
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Exclusive N. W. Distributors.

Dear Sirs:

Send me _____ No. 50 Cedarburg Utility Furnaces for
which I enclose \$ _____ in check or money order.

Name _____

Address _____

City _____

State _____

Amount Allowed for Postage _____

PACKAGE BEES

This has been a very good spring for the production of bees, so we can handle some additional orders. If you have not ordered your bees yet, rush your order in and we will give it our prompt attention.

Also, we have lots of good queens for last of May or June delivery.

CAUCASIANS AND ITALIANS

PRICES THROUGH MAY 20TH

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.25	\$4.00	\$5.10	\$6.20	\$7.30
25-99	1.15	3.75	4.80	5.85	6.90
100 up	1.05	3.50	4.50	5.50	6.50

PRICES AFTER MAY 20TH

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.10	\$3.85	\$4.95	\$6.05	\$7.15
25-99	1.00	3.60	4.65	5.70	6.75
100 up	.90	3.35	4.35	5.35	6.35

FOR QUEENLESS PACKAGE DEDUCT PRICE OF QUEEN
PAYABLE IN U. S. FUNDS

The Stover Apiaries : Mayhew, Miss.

BETTER THAN EVER QUEENS

FOR REQUEENING

\$1.10 ea. 25 or more Each . . . **\$1** 100 or more, each **90c**

25 or more queens shipped in special cage by express prepaid. This insures better delivery and easier introduction

NO MORE PACKAGES UNTIL 1947

J. M. CUTTS & SONS : Chipley, Fla.

B. A. Anderson & Company

The Home of Quality Queens

We have on hand a good supply of nice young laying light colored Italian Queens. We plan to have until Oct. 25th.

Price 75c each; 100 up 65c

These queens are bred from our select tested breeding queens that we know are reasonable, gentle, nice colored and good honey producers.

We guarantee live delivery, prompt service and perfect satisfaction. Fourteen years queen breeding experience.

We appreciate all trade, large or small. May we supply your needs?

B. A. Anderson & Co. : Opp, Ala.

RED STICK APIARIES & CO.

PACKAGE BEES AND QUEENS

Twenty-Six Years as Commercial
Queen Breeders.
Oldest Combless Package Bee
Shippers in Louisiana.

Prices After June 1st RESISTANT STOCK

QUEENS AND BEES

2-LB. PKGS. WITH QUEENS. \$3.50
3-LB. PKGS. WITH QUEENS. 4.50
QUEENS, EACH .90
Any Number

Red Stick Apiaries & Co.

Main Office, 125 Lessard St.,
DONALDSONVILLE, LOUISIANA
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HONEY WANTED

Ship your honey to us, we pay
the highest prices possible.
Light or dark. One tin or a car
load. WRITE us NOW.

Woodford Products

4532 N. Clark St., Chicago, 40

QUEENS

\$1.00 EACH. 100 up 90c

Beautiful queens from North-
ern 3-Banded Italian stock of
proven quality.

WICHT APIARIES

406 Miller Street : Hattiesburg, Miss.

KOEHNEN'S

Package Bees and Queens

For Quality and Service

KOEHNEN'S APIARIES

GLENN, CALIFORNIA

IMPERIAL

ITALIANS AND CAUCASIANS for the season

2-lb. package with queen, each \$4.25
3-lb. package with queen, each 5.25
Untested queens, each 1.25

THE COFFEY APIARIES

WHITSETT, TEXAS

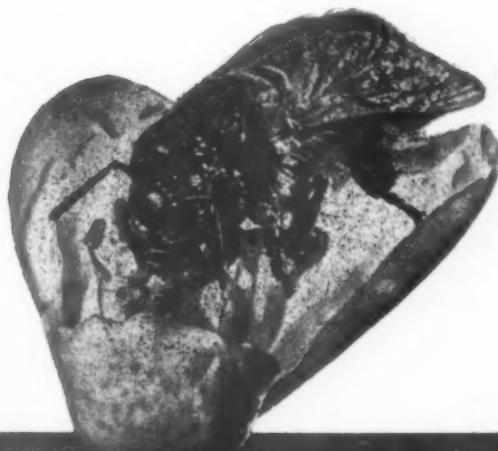
QUEENS - Select Three-Band Italians

PRICES AFTER MAY 20

1-24, \$1.10 25-99, \$1.00 100 up, \$.90
Place your order now for delivery May 20 and after. Replace those poor queens and
be SURE of a honey crop.

EUGENE D. CUTTS : Citronelle, Alabama

Good honey comes from good bees and
good flowers. Good sales come from
good-looking, easy to pack, easy to label
Hazel-Atlas Honey Jars.



HAZEL-ATLAS GLASS COMPANY

WHEELING, W. VA.

Middle Tennessee Apiaries : Leather Colored Italian Queens

From imported breeding stock. 1-25, \$1.25 each. 26 or more \$1.10 each. One-fourth
books orders—balance before shipping. Add 5 cents for all queens by air mail.

ALL QUEENS AFTER JUNE 15TH \$1.00 EACH

J. B. TATE & SON

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Telephone 34509 M.

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Classified Advertisements

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REAL PETS—Brown's non-stinging, non-swarming bees. Good producers. This season's queen price \$2 each. Brown's Apiary, Cape May Court House, N. J.

3-Banded Queens \$1.00 each. Dalice E. Crawford, Haw River, N. C.

BREWER'S LINE-BRED CAUCASIAN QUEENS—Breeding stock selected from 1,000 field tested colonies for honey production and gentleness. Open dates from June 15th. \$1.00 each, AIR MAIL, postpaid. Brewer Brothers Apiaries, 3217 Hawthorne Road, Tampa 6, Florida.

QUEENS—QUEENS—Best of quality, satisfaction guaranteed. 1 to 25, \$1.25; 25 to 50, \$1.15; 50 up, \$1.05. Health certificate with every order. Alamance Bee Company Geo. E. Curtis, Mgr., Graham, N. C.

GOLDEN ITALIAN QUEENS best of quality. Health certificate with every order. \$1.25 each, any number. Carolina Bee Farm, W. O. Curtis, Mgr., Graham, North Carolina.

GOLDEN QUEENS \$1.25 each. The Lambert Apiaries, Franklinville, North Carolina.

ITALIAN QUEENS selected for winter hardiness, production, non-swarming and resistance to A. F. B., \$1.25 each. Air mail extra. Ready June 15. R. E. Newell and Son, Medway, Massachusetts.

PACKAGE BEES—Italian queens. Circular free. Houck Company, Tiffin, Ohio.

PACKAGE BEES, QUEENS, Italians. Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

ITALIAN QUEENS from highest producers in the North and South. 75c each balance of season. Write for quantity prices and 1947 packages. S. J. Head, Crossett, Ark.

CAUCASIAN and CARNIOLAN queens. June 10th to October 1st, untested, one \$1.00; one hundred \$90.00. Tillery Brothers, Greenville, Alabama.

REQUEEN with the improved Mott Strain, 3-banded, northern bred, Italian queens. Gentle and good honey gatherers. Prices—1 to 50, \$1.10 each; 50 up, \$1.00 each. 25% cash with order. D. C. Tart & Co., Glenwood, Michigan.

GREEN'S profit-producing queens will please you as they have pleased hundreds of others. Famous the country over. Where could you do better? Price 90c each. D. P. Green, Route 2, Deland, Florida.

GOOD QUEENS FOR SUMMER AND FALL REQUEENING. Gentle three-banded Italian stock that has made outstanding records for honey production in areas where large crops are made. We now have the experienced help necessary to give you good queens and prompt service. Select young laying queens, \$1.10 each; 25 to 99, \$1.00 each; 100 or more, 90c each. Postpaid. Also package bees from now until October. They make fine summer increase. H. C. Short, Fitzpatrick, Alabama.

IMPROVED ITALIAN QUEENS. \$1.00 from a strain that produced over 600 lbs. of honey per colony. Henry Loehr, Jr. Caldwell, Texas.

HONEY AND BEESWAX WANTED

WANTED 100,000 lbs. of clover honey. Will pay highest cash prices. Guy Polley, Nevada, Iowa.

COMB HONEY—Please advise quantity you have, size section and how packed. I also need chunk honey in 16 oz. glass. F. G. Hauck, P. O. Box 84, Kew Gardens, N. Y.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rates of advertising in this classified department are eight cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other reference with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease or state exact condition, or furnish certificate of inspection from authorized inspectors. Conditions should be stated to insure that buyer is fully informed.

HIGHEST CASH PRICES paid for all grades extracted honey. Prairie View Honey Co., 12303—12th St., Detroit 6, Mich.

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WE PAY CEILING PRICES for wax, and remit the day the wax is received. Your wax made into medium brood foundation at 12 c per lb. The Hawley Honey Co., Iola, Kansas.

HONEY AND BEESWAX. HIGHEST PRICES PAID. MAIL SAMPLES. ADVISE QUANTITY. BRYANT AND COOKINHAM, LOS ANGELES, CALIFORNIA.

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CASH FOR YOUR WAX the day received. Write for quotations and shipping tags. Walter T. Kelley Co., Paducah, Kentucky.

SUPPLIES

WARNING N. W. BEEKEEPERS—Glass and tin honey containers continue to be very difficult to obtain. Don't get caught short again this fall. Order at least part of your container requirements NOW. You'll be glad you did. Send for price list. HONEY SALES COMPANY, 1806-08 No. Washington Ave., Minneapolis 11, Minnesota.

TRIMBLE'S DEVICE FEEDS SYRUP ACCURATELY, STEADILY, WITHOUT BOTHER, WASTE OR MESS. So extremely practical, easy, cheap, handy and simple that it will make you laugh. A dollar bill for four, with instructions. Quantities—**dime each.** Satisfaction guaranteed. Husky Machine Company, Warroad, Minnesota.

FIVE POUND Hazel-Atlas jars 33-1/3c per case 6, complete with covers. Freshly emptied of Louisiana Cane Sugar Syrup and cleaned perfectly. M. Simcovitz, Ferry St., Springfield, Mass.

FOUNDATION—Crimp-wired Brood and Super foundation, Thin Surplus and Cut Comb. Simeon Beiler, Intercourse, Pa.

DO-IT-WITH-BEES—Use Electric Heaters and Fans to air-condition your beehives—both summer and winter—reduce winter losses, summer swarming and produce more honey. Write today for FREE valuable information. D. F. McFarland, Engineering Council, Dept. A, Solon, Maine.

FOR SALE—Quality medium brood foundation at 70c per pound. Fred Peterson, Alden, Iowa.

ATTENTION BEEKEEPERS IN MINNESOTA, Wisconsin, Iowa, N. D. and S. D. Buy Lewis-Dadant Bee Supplies and Honey Containers in Minneapolis and save. Send for price lists. TOP PRICES PAID FOR HONEY AND BEESWAX IN CASH OR TRADE. HONEY SALES COMPANY, 1806-08 No. Washington Ave., Minneapolis 11, Minnesota.

WRITE FOR CATALOGUE. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

A new combined **CONTROLLABLE FEEDER AND SWARM CONTROL.** Useful also as inner cover, bee escape and robbing preventive board in queenlessness and drying wet combs; as winter top entrance and pollen feeder. Sample with directions, postpaid \$1.95; 5 (not assembled nor prepaid) for \$8.00. NICOLET COUNTY NURSERY, St. Peter, Minnesota.

INSTANT SEVEN AND NINE FRAME SPACERS. Fast—Accurate. Flat combs, easy uncapping. Set does all supers. \$1.50 postpaid. SPECIFY SIZE. George Lays, 48 Drake Avenue, New Rochelle 2, New York.

PORTER BEE ESCAPES are fast, reliable, labor savers. R & E. C. Porter, Lewis-town, Illinois.

HIVE BODIES, covers and bottom boards, bee shipping cages and nuclei hives. All supplies new and knocked down. Price list furnished on request. A & B Supply Company, Coffee Springs, Alabama.

LARGE CASH SAVINGS can be made by letting us work your wax into either wired or plain foundation. Large independent factory manufacturing a complete line of bee supplies including extractors, etc. Selling direct saves you the agent's profit. Quick shipment from large stock. Large free catalogue explains everything. Walter T. Kelley Co., Paducah, Kentucky.

FOR SALE

FOUR COLONIES of bees, equipment for about 90, including extractor, honey tank, uncapping can, queen excluders and supers, \$150.00. Located near Rutledge, Missouri. Owner, Roy Ryan, South Lansing, New York.

80 ACRES, 55 under cultivation, honey and truck farm on U. S. Highway 16. Fair buildings, 110 hives bees and equipment. Farm price \$6,000.00. Sell farm with or without bees. Wonderful location, electricity. Otto Zick, Rio, Wisconsin.

FOR SALE—300 hives of bees, two story. Clean. A-1 package district. Northeast shipping point close to apiary. George W. Bettfreund, Route No. 1, Box 532, Auburn, California.

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FOR SALE

FOR SALE—Used 10-frame bee supplies. Enough for 140 colonies of bees. No disease. Theodore Schleimer, Mapleton, Iowa.

FOR SALE—I dovetail machine for bee-hives, any size up to M. D. hive in one operation, \$300.00. H. A. Sundean, 122 Euclid Ave., Crookston, Minnesota.

HONEY LABELS—Improved designs, embodying color balance, simplicity and distinction. Please send for free samples and prices. C. W. Aeppler Company, Oconomowoc, Wisconsin.

BEEKEEPER'S HOIST weight 45 lbs. A neat 10 ft. folding tripod with block, winch, sling and clamp. \$25.00 f.o.b. Turner Mfg. Co., Corning, Iowa.

DADANT plain medium brood foundation, standard Hoffman frame size, 25 lb. boxes \$17.50; 94-gallon tank with two inch gate \$12.50; new Killion pollen trap \$2.50; double bottom capping melter with uncapping stand and kerosene stove \$17.50. Stanley Benson, McFarland, Wisconsin.

FOR SALE—Standard 10-frame supers. Edw. S. Winkler, 1115 Plainfield Rd., Joliet, Illinois.

FOR SALE—Used 45-frame Root Simplicity and $\frac{3}{4}$ inch honey pump, both in good condition. Oscar H. Schmidt, Rt. 4, Bay City, Michigan.

CLIP QUEENS without handling. **SIMPLEX TRAP** removes queen from hive, holds her in position for clipping elsewhere, without annoyance of flying stingers. \$1.75 postpaid—Free circular. George Leys, 48 Drake Avenue, New Rochelle 2, N. Y.

FOR SALE—Strong 2-story, 10-frame colonies in lots of 50 or more at \$10.00 each. Lewis equipment. Dadant wired foundation. Edward Klein, Gurnee, Illinois.

30 comb honey supers, 8-frame, $4\frac{1}{4} \times 4\frac{1}{4}$ sections, used, painted, fine condition, 75¢

each. 20 lbs. Dadant's thin super in five pound boxes, excellent condition, 75¢ per pound. Dan Hoffman, Naperville, Illinois.

WANTED

OLD SOLDIER wants 50 to 200 colonies of bees and equipment in Michigan. Send full details and price. Box GMO, American Bee Journal.

WANTED—Radial extractor in good condition. Donald Bohn, Rt. 8, Box 841B, Milwaukee 13, Wisconsin.

POSITIONS AND HELP WANTED

ATTENTION YOUNG MEN—If you are aggressive, able to drive truck or semi, are interested in buying a part of an organization that puts the bees on the honeyflow summer and winter, write. We make our own breaks. Penn-Michigan Apiaries, 500 S. Almer St., Caro, Michigan.

WANTED—Experienced helpers for queen yards, package bee yards and general bee work. Only honest reliable men considered, no boozers. Give full information, age, experience, reference and salary expected in first letter. York Bee Company, Jesup, Georgia.

INSECTICIDES

TRITOX—FOR GREATER PRODUCTION. Highest quality garden insecticide and fungicide. A complete dust or spray program. Tritox is the recognized standard to meet your garden needs. 5 lbs. parcel post \$1.25. **TRITOX CHEMICAL COMPANY, WASHINGTON, INDIANA.**

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RAISE giant chinchilla rabbits. Delicious meat. Gorgeous fur. Big demand now for fur. Small space. Easy work. Little time. Profitable as an investment. Fun as a hobby. Send for beautifully illustrated booklet, free. Willow Brook Farm, R. 108, Sellersville, Pa.

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LAST CALL—NECTAR and POLLEN producing shrubs, trees and plants can yet be mailed this month when packed in sphagnum moss. Write today for free descriptive circulars. **NICOLLET COUNTY NURSERY, St. Peter, Minnesota.**

FOR SALE—Sainfoin seed. Over 10 lbs., 55¢ per lb. Less, 75¢ per lb., not postpaid. Perennial legume, soil builder, hay crop and honey plant. R. W. Brimhall, Pleasant Grove, Utah.

MISCELLANEOUS

INDIAN BEE JOURNAL—Official organ of the All India Beekeepers' Association. Yearly subscription price \$1.50 a year (7s 6d) by international money order. Address **INDIAN BEE JOURNAL, Ramgarh, Dist. Naini Tal, U. P. India.**

EARTHWORM CULTURE—Send postcard for valuable FREE bulletin, with review on "Intensive Propagation and Use of Earthworms in Soil-building." Thos J. Barrett, Earthmaster Farms, Box 458-H, Roscoe, California.

RANCH MAGAZINE—Do you find it difficult to secure information about sheep and sheep ranching methods? **THE SHEEP AND GOAT RAISER** reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apis Club, The Way's End, Foston, England.

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TOP PRICES PAID**

Will furnish 60-lb. cans if desired

C. W. AEPPLER CO. : Oconomowoc, Wisconsin



Gentle Northern Queens

From Tested 3-Banded Italian
Breeding Stock

All queens are reared under natural conditions in large over-wintered queen-right colonies. Nature's way of producing large fully developed queens.

This hardy northern strain of Italians is meeting with approval in many parts of the world.

Prices June 1st to October 15th
Young untested

1-24 ----- \$1.10
25 up ----- 1.00

Young tested

Any quantity ----- \$2.00
Queens shipped Airmail Postpaid

Approved package bees shipped from the South by express collect, 3-lb. pkg. \$5.00, cash with order. Prompt service, satisfaction.

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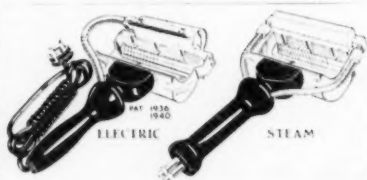
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ANY QUANTITY, QUOTE PRICE
WE PAY THE FREIGHT

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NEW IMPROVED

Rosedale Steam and Electric Uncapping Plane



Electric Plane ----- \$10.00
Steam Plane ----- 7.50
Ext. Copper Blades ----- .75
Delivery charges extra.

JOHN J. MAENDEL
PORTAGE LA PRAIRIE,
MANITOBA, CANADA

Italian Bees and Queens

Prices to June 1

Queens	2-Lb.	3-Lb.	4-Lb.
1-24	\$1.25	\$4.00	\$5.10
25-99	1.15	3.75	4.80
100 up	1.05	3.50	4.50

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FOR SALE

BRIGHT YELLOW AND THREE
BAND QUEENS

GRAYDON BROS.

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When Writing Our Advertisers
Please Mention the Bee Journal.

Crop and Market Report

Compiled by M. G. Dadant

For our June Crop and Market page, we asked reporters to answer the following questions:

1. Condition of bees?
2. Condition of plants?
3. How is the crop so far compared to 1945?
4. Prospects compared to 1945?

Condition of Bees

The condition of bees throughout the entire country is very satisfactory except the dates most reports were sent in about May 10 to 15 gave bees as being stronger than usual at this time of the year and there were possibilities of necessity for feeding. In fact many of the reporters had already been feeding and we believe that if feeding has not been done between time of report and issuing of magazine, many colonies will have suffered for want of stores. This is partly due to the fact that the spring season was in the main, cold and cloudy after an earlier warm spell. On the whole, it is probable that the bees' condition was above average in the southeastern states, near average in New England and north central states in the East, slightly above average in the central west and perhaps above average in the plains area with somewhat below average in the inter-mountain territory. In California where conditions have been adverse earlier, the bees were building up quite rapidly.

Condition of Plants

Throughout the entire United States plant conditions have improved. Many reporters stated that it was too dry and this was particularly true in the northern sections of the country. The writer on a trip to northern Illinois found quite drier conditions than at Hamilton. However, rains at the time of the trip in mid-May probably were general and partly corrected this condition. These dry conditions extended into

the western provinces of Canada and into the inter-mountain territory in many instances, particularly on the western slope and to Utah and Nevada. While California moisture conditions earlier were very unsatisfactory for sage, buckwheat and other wild plants, later rains seem to have partially corrected this difficulty and flows were coming in from these areas which was a surprise to beekeepers who had previously reported no possibility of a crop. Northern sections of California, however, are still dry and possibilities of a crop rather vague.

Crop Compared to 1945

The southeastern states apparently have a heavier crop so far than in 1945 which was a near failure. The orange particularly in Florida has been excellent and Georgia reports above average with similar conditions extending throughout the southern states as far as East Texas and South Texas.

Average conditions prevail in Arizona and the orange crop in California has perhaps been the equal of last year which was by no means a heavy crop.

The stimulative crop throughout central areas and northern areas were in the main, poor. However, at the time this is being written on May 20, clover has begun to yield and in some cases some supers are filled, whereas other reporters still state starvation conditions and bees robbing.

Prospects

On the whole, we believe if beekeepers are forewarned and see that their bees do not starve, conditions are two weeks ahead of ordinary and honey plants are also blooming ahead. We have reports of white clover flows in the north central states where scale colonies are gaining 5 to 10 pounds daily and as much as a super full of honey already. In the

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Cars and less than cars
Top Prices

C. W. AEPPLER CO., Oconomowoc, Wisconsin

**HONEY WANTED Carloads or Less
HIGHEST PRICES PAID**

LEWIS A. KONCES CO.
NORTH ABINGTON, MASS.

main, however, one can hardly expect anything from the clover flow before June 1 to 10 and perhaps rains and cooler weather may yet interfere.

Heavy freezing in the northern areas on May 10 froze all tender plants and in many cases from northern Iowa northward, all the leaves on the trees, potatoes, etc., so that there will necessarily be an interval before a come back of some of the honey producing plants. The Black Hill section of South Dakota, eastern Montana and down into Wyoming appear to be below last year in prospects unless rains fall copiously to correct conditions.

We have a few reports of sweet clover being plowed under in great quantities in the central west and northern areas but we do not believe the plow under is sufficient to balance the additional amount of clover sown this last season.

While Saskatchewan is reporting extremely dry conditions, Manitoba and eastern provinces of Canada apparently are well satisfied with bee and plant conditions and are anticipating at least the equal of last year. The freeze there, as in northern states has been severe and set back much growth. We would anticipate that from central Illinois southward the frost did little or no damage.

On the whole, undoubtedly more bees are going into production this year than a year ago, even with the shortage of wooden ware since many bee hive bodies are being filled up and make-shift used for covers, bottoms, etc. It is true, however, that there is going to have to be a quick turnover of supers this year with the added number of colonies because there will not be sufficient supers on hand to cover anything like a normal or more than average crop which seems now in prospect in most locations.

While tinware apparently is going to be obtainable in satisfactory quantities, glass jars and bottles are still extremely hard to get. We urge our readers to stock themselves with sufficient storage for a more than average crop and to buy such small containers as they need and labels as early as possible to anticipate a rush similar to that which has been experienced in the past few months for package bees.

One Can or a Carload—What have you? Mail your offerings to us.—Prompt action. Cash on delivery.

JEWETT & SHERMAN CO.

Lisbon Rd. & Ervins Ave.
Cleveland, 4, Ohio

1204 W 12th St.
Kansas City Mo.

Three-Banded Italian Bees & Queens

We have plenty of fine bees and queens available for shipment. Send your orders in by return mail.

	Queen	2-lb. with queen	3-lb. with queen
1-24	\$1.00	\$3.50	\$4.50
25 up	.90	3.25	4.25

For queenless package subtract price of queen.

We do not wish to quote any prices on 4-lb. and 5-lb. this late as it is very hard to get them through.

We ship only overweight packages of young bees and young queens, guaranteed to be purely mated. Direct all mail to us at Leroy, Alabama and telegrams to us at Jackson, Alabama.

HOLDER APIARIES : Leroy, Alabama

(In the Mild Climate of the Deep South)

YORK'S

Package Bees and Queens For 1946

QUALITY BRED ITALIANS

No Change in Price For Coming Season

PACKAGE BEES WITH YOUNG LAYING QUEENS

Quantity	1 to 2	3 to 27	30 to 96	99 up
2-lb. pkgs. --	4.25 each	\$4.10 each	\$3.95 each	\$3.75 each
3-lb. pkgs. --	5.25 each	5.10 each	4.95 each	4.75 each
Extra Queen	1.30 each	1.25 each	1.25 each	1.25 each

Queenless packages, deduct \$1.10 per package

Booking orders now for 1946, same terms and price. We thank our customers for their patronage and will be prepared to serve you better with highest quality the coming season. A large number of buyers have already placed orders for coming season and if you have not done so, we urge you do so without delay for better choice of shipping dates. There is every indication of an extra heavy demand. Order direct from this ad and save time.

YORK BEE COMPANY

JESUP, GEORGIA, U. S. A.

(The Universal Apiaries)

June Packages and Queens

We have plenty of bees and open shipping dates for both queens and packages. This month is the time to add queenless packages to those weaker colonies. It will stimulate brood rearing and give them a wonderful boost.

No disease of any kind in our colonies. State Health Certificate with each shipment

	1-24	25-99	100-up
2 pounds of bees with queen	\$4.00	\$3.75	\$3.50
3 pounds of bees with queen	5.00	4.75	4.50

Queens \$1.00 each, any number

For queenless packages, deduct price of queen

W. E. PLANT

Hattiesburg

Rt. No. 2

Mississippi

Keep up on the bees—read the A-B-J

Yellow Italian Queens

Selected young untested laying queens, live delivery and health certificate guaranteed. 1 to 9 at \$1.00; 10 to 24, 90c; 25 or more 80c. Postpaid. Write for prices on large lots.

Plauche Bee Farm
HAMBURG, LA.

BOOKING ORDERS FOR 1946

for our bright Three-Banded Italian Queens and Package Bees. Prices:

	Queens	2-Lb.	3-Lb.
1 to 24	\$1.10	\$3.85	\$4.95
25 to 99	1.00	3.60	4.65
100 up	.90	3.35	4.35

We ask 10% deposit with orders booked in advance. We guarantee safe arrival, satisfaction.

TAYLOR APIARIES : Box 249, Luverne, Ala.



Soy Flour
and Pollen Traps



We are distributors of Staley's Lo-Fat, High Protein expeller processed soy flour for beekeepers. We offer the finest quality in soy flour and pollen traps.

Killion & Sons' Apiaries
PARIS, ILL.

ITALIAN BEES AND QUEENS

PRICES

2-lb. package with queen	\$3.25
3-lb. package with queen	4.25
4-lb. package with queen	5.25
Queens, each	.90

HOMAN BROS.

RT. 2 SHANNON, MISSISSIPPI

ROOT QUALITY BEE SUPPLIES

GLASS AND TIN CONTAINERS
HONEY AND BEESWAX WANTED

M. J. BECK CO.

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Subscription \$1.00 per year, \$1.50 two years, \$2.00 three years. In combination with American Bee Journal \$1.75 per year.

Timely topics on western Canadian beekeeping and all the news about Canada and Canadian markets. You cannot afford to be without the most up-to-date information in these days of great changes. Sample copy free. Address **WESTERN CANADA BEEKEEPER**, Wallingford Building, Winnipeg, Manitoba, Canada.

AMERICAN RABBIT JOURNAL

Shows the Way to Success...

Gives the latest news and views of the rabbit world—an illustrated monthly magazine of general and educational features. One year \$1.00; three years, \$2.00; sample 15c.

AMERICAN RABBIT JOURNAL

Dept. S. Warrenton, Missouri

The Postscript

In his very interesting book, "Plants and Beekeeping," F. N. Howes, of the Royal Botanical Garden of England, tells of the planting of Phacelia with sweet clover to provide bee pasture for the first year before the sweet clover comes into bloom. Phacelia is used to some extent in Germany for forage and is said to make good silage. This is the first account of a mixture of phacelia and sweet clover to come to our attention but for bee pasture it would seem to be a combination that would be hard to beat.

The creeping trefoil (*Lotus major*) which looked so promising in the test plots last year has all disappeared during the winter. Thus we find another case where first impressions were deceiving. The plant did very well through two summers and one winter before it was lost. Apparently it requires acid soils and our soil is very alkaline. In view of its final loss it is hard to understand how it did so well for two seasons. The bird's-foot trefoil, on the other hand, which has been with us for eight years looks as well as ever again this spring.

Visitors to our test garden should not expect too much. It is not a show place. We have simply brought together a large variety of plants in an effort to find those most attractive to the bees. This is the fortieth year since it was started and although we have found a few promising new things there have been far more disappointments. I do not lay any claim to being a scientist but do have a great deal of curiosity about the relationship between plants and animals. One who plants new things before they have been generally tested must expect a high percentage of failures but it is only in this way that information can be gained as to what will succeed in a particular location.

Our American basswood tree is famous as a source of honey and in the years before the forests were so generally cut it was the source of large quantities of honey. It is

erratic in its nectar secretion with heavy yields some years and little in other seasons. Apparently old trees are more dependable than younger ones. The flowering period is short and the flow lasts but a few days. With us the bloom is usually at its height about the fourth of July.

There are about thirty different species of *Tilia* which are commonly called lime trees in Europe while we call them basswoods. Since the different species bloom at different times it would be possible to have one or another in flower from about the middle of June to mid-August by planting several kinds. It would seem well worth while for beekeepers to urge the use of this tree for roadside planting. If several kinds were used the blooming period could be extended over nearly two months. A substantial addition to the bee pasture would easily be possible by this plan.

W. B. Tower, of Farmington, California, reports that there are large plantings of Ladino clover in that region; that it has a long blooming season but that the bees barely make a living from it. From New England come reports of large yields of honey from Ladino. Here is another illustration of the difference in behavior of plants under climatic variations. Edwin F. Tuttle, of Milford, Massachusetts, has alfalfa on his farm but writes that he has yet to see a bee on it. In California bees gather big crops from alfalfa. Tuttle says that catnip and motherwort are the two plants most worked by bees. Apparently these plants are adaptable since reports from widely differing localities indicate that the bees work them heavily.

A. J. Schubert, of Humphreys, Missouri, is one beekeeper who is doing something to improve his pasture. He is making extensive planting of trees and shrubs for windbreak and hedges. More than 1,000 black locust are included along with bush honeysuckle, pea-tree, Russian olive and others.

FRANK C. PELLETT,
Atlantic, Iowa.

AMERICAN BEE JOURNAL

ITALIAN QUEENS

AFTER MAY 10TH, \$1.00 EACH.
We would appreciate the opportunity
of serving you.

RAPIDES APIARIES

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GLEANINGS IN BEE CULTURE

FEATURE ARTICLES—NEWS ITEMS
MONTHLY TALKS TO BEEKEEPERS

Subscription Rate

1 year, \$1.50; 2 years, \$2.50; 3 years \$3.00
In United States and Canada.

THE A. I. ROOT CO.

MEDINA, OHIO

Caucasian Queens

3-lb. package after May 14th...\$5.00
Queens after June 1st..... 1.00

D. T. WINSLETT

1015 Sonoma Ave.
NO. SACRAMENTO 15, CALIFORNIA

Queens 3-Banded Italians

AFTER JUNE 1ST.

1-24\$1.10
25-99 1.00
100-over90
Pure mating, satisfaction guaranteed

S. C. Zeigler

FORT DEPOSIT, ALABAMA

BEE SUPPLIES

Foundation—Standard Sections? Yes!
Wooden goods orders shipped in turn
as available! It's time to think about
glass containers. Nearby inquiries
solicited. Lewis-Dadant dealer.

SWISHER'S MARKET

P. O. Box 806, Springfield, Ohio

HONEY WANTED

ALL GRADES—ANY QUANTITY

Bryant & Cookinham

LOS ANGELES HONEY CO.

2425 Hunter Street
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BLUE RIBBON

PACKAGE BEES

"Best in the West"

ITALIAN QUEENS \$1.25 EACH
THOS. C. BURLESON, COLUSA, CALIF.

BEE SUPPLIES

A. H. RUSCH & SON CO.

REEDSVILLE, WISCONSIN

Manufacturers

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CHOOSE LABELS WISELY

You Can't Go Wrong
With A-B-J LABELS

They sell honey and are priced right.

Send for complete catalog.

American Bee Journal :: Hamilton, Ill.

28 Years Learning How Prepares Us Well to Serve You Now

SUMMER PRICES

ITALIAN QUEENS	1-24	\$1.10
From Finest Breeders	25-99	1.00
	100 up	.90

J. F. McVAY : Jackson, Ala.

ITALIAN BEES AND QUEENS

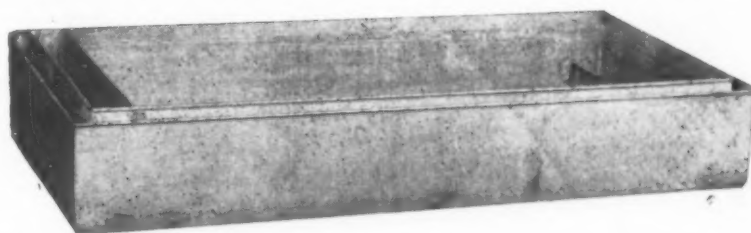
WE WILL ACCEPT ORDERS FOR IMMEDIATE DELIVERY

Queens	2-Lb. Pkgs.	3-Lb. Pkgs.
85c Each	\$3.50 Each	\$4.50 Each

Gulf Coast Bee Co.

Schriever, La.

BETTER HONEY WITH LESS WORK



Neises Gravity Honey Clarifier and Filter

Warms the honey and removes wax, pollen, propolis and other impurities at
extractor outlet. Write for catalog of our equipment which gives valuable
information on processing honey.

THE NEISES COMPANY

LOCK BOX 249

MARSHFIELD, WISCONSIN

ITALIAN PACKAGE BEES AND QUEENS

On the same old Basis—QUALITY,
SERVICE, SATISFACTION

2-lb. bees with queen	\$3.65
3-lb. bees with queen	4.65
4-lb. bees with queen	5.80
Queens	1.10
Queenless packages deduct	\$1.00

E. J. BORDELON APIARIES : Box 33, Moreauville, La.

ITALIANS

QUEENS

Daughters of Queens
bred for Resistance

CAUCASIANS

Bred to Italian
Drones

All three races bred in separate yards.

2-lb. pkg. bees with queen	\$4.00	Extra queens \$1.25 each. Over 25 years
3-lb. pkg. bees with queen	5.00	a shipper in U. S. A. and Canada.

Sulfathiazole used in feed at no extra cost to you. MASTER MIX POLLEN made
from soybean flour, cottonseed meal, brewers yeast, skim milk, natural pollen, invert
sugar and Sulfathiazole, 10-lb. pail \$2.50; six pails \$13.50. Send for FREE Circulars.

Blue Bonnet Apiaries, R. 2, Box 23, Weslaco, Texas

Gooch's Best Bees and Queens

We have plenty of queens, let us figure with you on requeening your entire apiary with our Three-Banded or Bright Yellow Italian honey getting queens. We do not breed from any queen that does not produce as much as 300 pounds surplus honey. 5% discount to veterans. We furnish health certificate.

1 to 49 ----- \$1.00 each. 50 and up ----- \$.90 each

JESSE E. GOOCH & SONS, R.F.D. 3, Pine Bluff, Ark.

Three-Banded Italian Package Bees and Queens

Here is where you can get prompt shipments on Italian Package Bees and Queens after May 5th. So get your order in now. Full weight and live arrival guaranteed.

PRICES AFTER MAY 5TH

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.
1-24 -----	\$1.10	\$3.85	\$4.95	\$6.05
24-99 -----	1.00	3.60	4.65	5.70
100-up -----	.90	3.35	4.35	5.35

WRITE FOR SPECIAL PRICES ON QUEENS TO BE SHIPPED AFTER MAY 15TH

FARRIS HOMAN : Shannon, Miss.

AFTER MAY 20TH

PERSONALLY REARED QUEENS

As good as money can buy \$1.00 each

ITALIANS CAUCASIANS

WEAVER APIARIES : Navasota, Texas

Shaw's Package Bees and Queens

We are hooked for all package bees we can supply up to May 15th. Will have plenty of Italians also daughters of queens bred for resistance. Can start sending queens any time after April 15th.

PRICES THROUGH MAY 20TH

Lots of	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1 to 24 -----	\$1.25	\$4.00	\$5.10	\$6.20	\$7.30
25 to 99 -----	1.15	3.75	4.80	5.85	6.90
100 up -----	1.05	3.50	4.50	5.50	6.50

AFTER MAY 20TH

Lots of	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1 to 24 -----	\$1.10	\$3.85	\$4.95	\$6.05	\$7.15
25 to 99 -----	1.00	3.60	4.65	5.70	6.75
100 up -----	.90	3.35	4.35	5.35	6.35

A. E. SHAW : Shannon, Miss.

American Bee Journal Classified Ads Bring Satisfactory Results

Creole Carniolan Queens

\$1.00 EACH, POSTPAID

Ephardt Honey Farms

PLAUCHEVILLE, LOUISIANA

ORDER AHEAD

DON'T GET CAUGHT IN THE SUMMER RUSH FOR

HONEY LABELS

Be forearmed by getting your labels in stock now.

Write for samples and prices to

AMERICAN BEE JOURNAL

HAMILTON, ILLINOIS

MOORE'S STRAIN

Away back in 1879 I commenced rearing Italian queens with the object of improvement constantly in view.

By careful selection during all these years I have succeeded in producing a strain of three-banded, leather-colored Italian bees, known as MOORE'S STRAIN OF ITALIANS, which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Send for descriptive circular and read reports from those who have tried them.

Untested Queens, \$1.25 each; 6 for \$7.00; 12 or more, \$1.00 each.

J. P. MOORE, R 3, Falmouth, Ky.

Former address, Morgan, Ky., U. S. A.
Safe arrival and satisfaction guaranteed.

BEEMEN, BEE-WARE

Of over one year old queens. Requeen with young, THREE-BANDED LEATHER COLORED ITALIAN QUEENS NOW. Satisfaction, health, clipping, painting and air mail if possible at no extra cost. Any quantity, selected, untested, \$1.00. Tested \$2.00.

Write for package prices.

GOOCH APIARIES
Farmersville, Texas.

The BEEKEEPERS ITEM

The Southern beekeepers' own magazine, but read by studious honey producers everywhere.



With the American Bee Journal makes a combination that covers the beekeeping field.

Send \$2.00 and get Both Magazines for a year BEEKEEPERS ITEM, Paducah, Kentucky

PIGEONS

If you are interested in Pigeons, you need the AMERICAN PIGEON JOURNAL, an informational instructive 52 page monthly magazine, sample 15c; 12 months, \$1.50. Dept. B

Warrenton, Mo.

American Bee Journal Classified Ads Bring Satisfactory Results.

AMERICAN BEE JOURNAL

1896 **50** 1946
Years' Experience

Our Golden Anniversary

The year 1946 marks the 50th year of continued service in the manufacture of beekeepers supplies.

With this wealth of knowledge and experience we feel we are in better position than ever to give our customers that valued quality and service that has meant so much to them in the past 50 years.

In order to assure yourself of that continued service we suggest you order early this year. Although we have an ample supply of HONEY SECTIONS, HIVE BODIES, SUPERS AND FRAMES at present, from all indications the year 1946 will make even greater demands on the industry.

Write for our SPECIAL PRICE on number two (2) beeway sections ($4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$); also ask for our new 1946 price list of supplies now on hand and available to our customers.

MARSHFIELD MFG. CO.
MARSHFIELD, WISCONSIN

JENSEN'S
Super Quality QUEENS

"Magnolia State" Strain. Our own development, and still our standard. Also Daughters of Disease Resistant stock, parentage of which have been tested under proper supervision and authority in Iowa and Illinois. Both Breeding queens and drone mothers have been subjects in these tests. We are reproducing daughters of this stock in isolation apiaries sufficiently removed from any other bees to insure as nearly 100% purity of mating as is possible in nature. If American Foulbrood is prevalent in your territory, introduce these queens as a safeguard.

Prices for Balance of Season

"MAGNOLIA STATE" STRAIN

1-24, \$1.10 each. 25-99, \$1.00 each. 100 up 90c each

DAUGHTERS OF D/R (Disease Resistant)

1-24, \$1.25 each. 25 and up \$1.15

JENSEN'S APIARIES
MACON, MISS.

"Where Quality Reigns Supreme"

PUETT'S
 Pure Bred
 Three-Banded
 Italian
QUEENS
\$1.00

You can get no better
 than the best

The Puett Co.
Hahira, Ga.

ITALIAN
QUEENS

POSTPAID TO YOU

ANY NUMBER—

85c
EACH

TANQUARY HONEY FARMS
INCORPORATED
LENA, SOUTH CAROLINA

The Beekeeper

*gets another super for
each colony*

The beekeeper had spent a profitable afternoon. Realizing that it would be difficult to buy more supers,



Three-Ply Combs Are
100% Productive

he started examining each comb carefully, removing all of the ones that had large patches of drone cells or damaged areas. Many of these combs were only 75% efficient. This unproductive area, when replaced with good combs, was *just like adding another super to each colony.*

It means the possibility of getting 60 more pounds of honey.

HOW TO GET AN EXTRA SUPER

Thousands of beekeepers from the equator to the Canadian clover fields have demonstrated in their own apiaries the superior qualities of

Three-Ply Airco Foundation

—the foundation that the bees draw out into the maximum number of worker cells; the foundation that makes every comb productive and gives you that extra super of space.

BUY THREE-PLY FOUNDATION Stocks on Hand

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QUALITY
BEE SUPPLIES

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